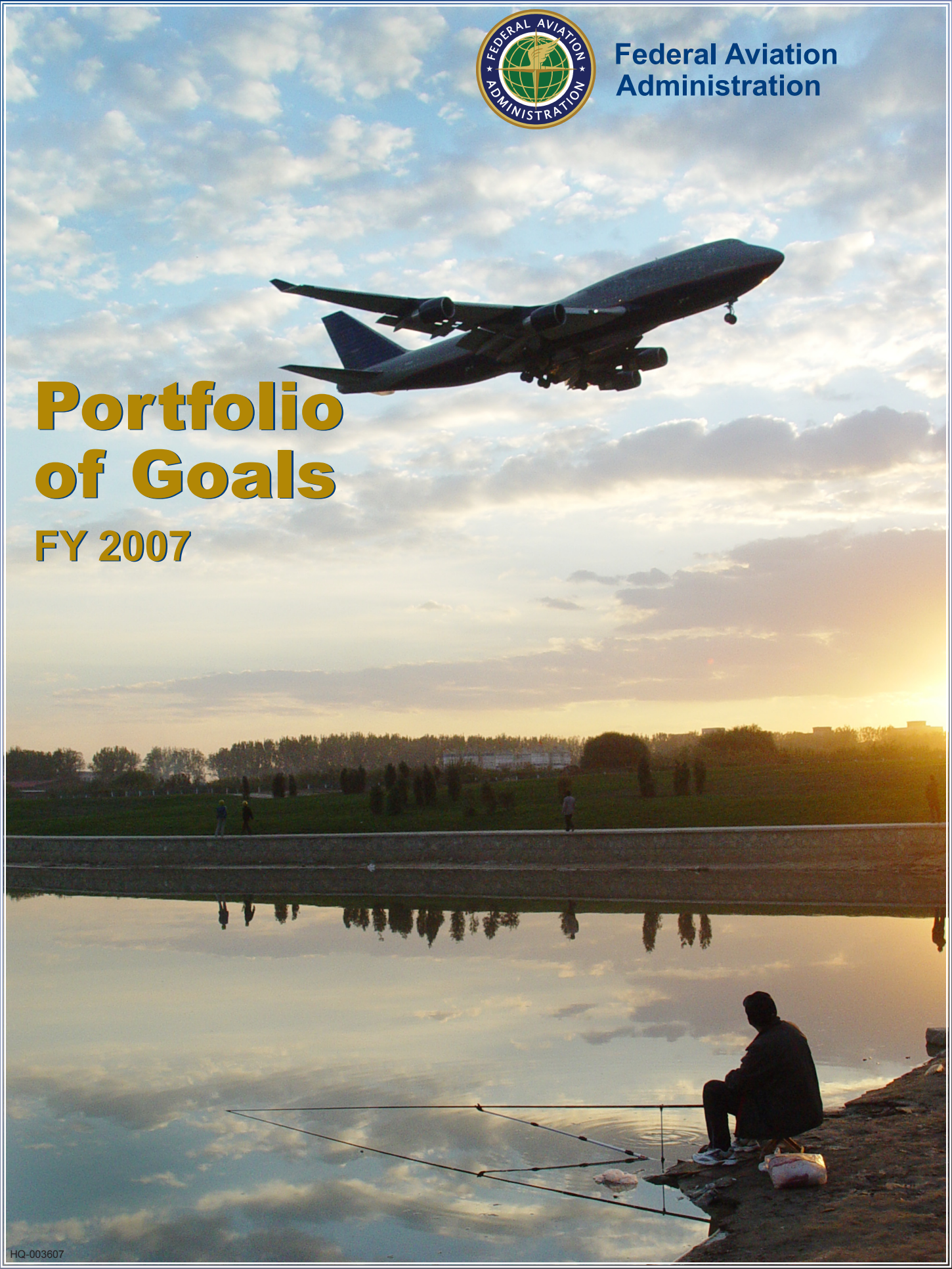
Federal Aviation Administration

Portfolio of Goals

FY 2007



HQ-003607

PORTFOLIO OF GOALS
FY 2007

TABLE OF CONTENTS

Safety

Greater Capacity

International Leadership

Organizational Excellence

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SAFETY
Commercial Air Carrier Fatal Accident Rate

Federal Aviation Administration

FY 2007 Performance Target

"Limit the three-year rolling average fatal accident rate to 0.010 fatal accidents per 100,000 departures."

Flight Plan Objective and Performance Target

Objective 1: Reduce the commercial air carrier fatal accident rate.

Performance Target: Limit the three-year rolling average fatal accident rate to 0.010 fatal accidents per 100,000 departures.

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Target	0.033	0.028	0.023	0.018	0.010
Actual	0.024	0.021	0.017[1]	0.020[2]	

[1] Preliminary estimate until March 2007. Revised in FY 2006 from the original estimate of 0.016.
[2] Preliminary estimate until March 2008.

Definition of Measure

Unit of Measure: Rate of fatal accidents per departures.

Computation: A rolling three-year average of the accident rate is used to measure performance against annual targets. The three-year average is calculated by dividing the number of accidents for the previous 36 months by the number of departures.

Formula:

$$\frac{(FY1 + FY2 + FY3)\ \text{Fatal Accidents}}{(FY1 + FY2 + FY3)\ \text{Departures}} = \frac{X}{100{,}000\ \text{Departures}}$$

Scope of Measure: This measure includes both scheduled and nonscheduled flights of U.S. passenger and cargo air carriers (14 CFR Part 121) and scheduled flights of regional operators (14 CFR Part 135). It excludes on-demand (i.e., air taxi) service and general aviation. Accidents involving passengers, crew, ground personnel, and the uninvolved public are all included.

Why the FAA Chooses this Measure

The goal to reduce fatal commercial accidents by 80 percent in ten years originated in the final report of the White House Commission on Aviation Safety and Security issued on February 12, 1997. The National Civil Aviation Review Commission in its report, *Avoiding Aviation Gridlock & Reducing the Accident Rate* (December 1997), ratified this goal. In response to these reports, the FAA initiated a joint government-industry analysis of causal factors for aviation accidents. The resulting document, *Safer Skies – A Focused Agenda*, has formed the basis for joint government-industry efforts to reduce the number of accidents in both the commercial and general aviation areas.

Source of the Data

The data on commercial and general aviation fatal accidents come from the National Transportation Safety Board's (NTSB's) Aviation Accident Database. Aviation accident investigators under the auspices of the NTSB develop the data. Departure data is submitted by carriers to the Office of Airline Information (OAI) within the Bureau of Transportation Statistics.

Statistical Issues

Both accidents and departures are censuses, having no sampling error. However, missing data, particularly in the departure counts, will result in bias to some degree. The fatal accident rate is small and could significantly fluctuate from year to year due to a single accident. Use of an average over three years smoothes the fluctuation that may occur in any given year.

The joint government/industry group working on improving the level of safety for U.S. commercial aviation has determined that the number of departures is a better denominator measure to use for determining accident rates and the General Accounting Office recommended that FAA use departures.

Completeness

The FAA does comparison checking of the departure data collected by BTS. However, FAA has no independent data sources against which to validate the numbers submitted to BTS. FAA compares its list of carriers to the DOT list to validate completeness and places the carriers in the appropriate category (i.e., Part 121 or Part 135). Actual departure data for any given period of time is considered preliminary for up to 12 months after the close of the reporting period. This is due to amended reports subsequently filed by the air carriers. However, the changes to departure data rarely have an effect on the annual fatal accident rate. NTSB and FAA's Office of Accident Investigation meet regularly to validate the accident count.

To overcome reporting delays of 60 to 90 days, FAA must rely on historical data, partial internal data sources, and Official Airline Guide (OAG) scheduling information to project at least part of the fiscal year activity data. FAA uses OAG data until official BTS data are available. The air carrier fatal accident rate is not considered reliable until BTS provides preliminary numbers. Due to reporting procedures in place, it is unlikely that calculation of future fiscal year departure data will be markedly improved. Lacking complete historical data on a monthly basis and independent sources of verification increases the risk of error in the activity data.

Reliability

Results are considered preliminary based on projected activity data. FAA uses performance data extensively for program management, personnel evaluation, and accountability. Most accident investigations are a joint undertaking. NTSB has the statutory responsibility, but, in fact, most of the accident investigations related to general aviation are conducted by FAA Aviation Safety Inspectors without NTSB direct involvement. FAA's own accident investigators and other FAA employees participate in all accident investigations led by NTSB investigators.

SAFETY
General Aviation Fatal Accidents

Federal Aviation Administration

FY 2007 Performance Target

"Reduce the number of general aviation and nonscheduled Part 135 fatal accidents to 331."

Flight Plan Objective and Performance Target

Objective 2: Reduce the number of fatal accidents in general aviation.

Performance Target: By FY 2009, reduce the number of general aviation and nonscheduled Part 135 fatal accidents from the 1996-1998 average of 385 per year to no more than 319 accidents per year. This measure will be converted from a number to a rate after FY 2009. The targets for FY 2010-2011 are under development.

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Target	374	349	343	337	331
Actual	366	340	354[1]	300[2]	

[1] Preliminary estimate until March 2007.
[2] Preliminary estimate until March 2008. Revised in FY 2007 from original estimate of 297.

Definition of Measure

Unit of Measure: Total number of fatal general aviation accidents.

Computation: A count of the number of general aviation fatal accidents during the fiscal year. The first baseline of 379, against which future targets were set, was established based on data from the years 1996 to 1998. However, due to a switch in NTSB reporting from calendar to fiscal year and the addition of previously unrecorded fatal accidents, the baseline has been revised to 385.

Formula: N/A

Scope of Measure: This measure includes on-demand (non-scheduled FAR Part 135) and general aviation flights. General aviation comprises a diverse range of aviation activities, from single-seat homebuilt aircraft, helicopters, balloons, single and multiple engine land and seaplanes, to highly sophisticated extended range turbojets.

Why the FAA Chooses this Measure

The FAA and general aviation community developed the general aviation fatal accident goal as an overall measure of the impact of improved safety. Since it does not use a measure of activity to take into account changes in activity levels from year to year, the goal reflects a target based on projected growth in general aviation activity as reported in the FAA's annual General Aviation forecasts.

Source of the Data

The data on general aviation fatalities come from the National Transportation Safety Board's Aviation Accident Database. Aviation accident investigators under the auspices of the National Transportation Safety Board (NTSB) develop the data.

Statistical Issues

There is no major error in the accident counts. Random variation in air crashes results in a significant variation in the number of fatal accidents over time.

The FAA would prefer to use a fatal accident rate rather than fatal accidents as the performance measure because the use of a rate measure would take into account variation in activity levels from year to year. However, unlike commercial aviation activity that is reported regularly to the Bureau of Transportation Statistics by the carriers, general aviation flight hours are based on an annual voluntary survey conducted by the FAA. Due to the voluntary nature of the survey, the accuracy of the flight hours collected is suspect and there is no readily available way to verify the data. For these reasons, the general aviation community is unwilling to use a rate measure until the validity and reliability of the survey data can be assured.

The general aviation community and the General Aviation (GA) Joint Steering Committee of the Safer Skies initiative recommend development of a data collection program that will yield more accurate and relevant data on general aviation demographics and utilization. Improved survey and data collection methodologies have been developed.

As a result of these efforts, the FAA, working with the General Aviation Manufacturers Association, has made several improvements to the survey. First, the sample size has been significantly increased. Second, a reporting sheet has been created to make it much easier for organizations with large fleets to report. Third, the agency worked with the Aircraft Registry to improve the accuracy of contact information. As a result, a survey was completed in FY 2004 that, for the first time, creates a statistically valid report of general aviation activity that the GA community agrees on. The next step is to create the baseline and work with the GA community on a reasonable target for the rate.

Completeness

NTSB and FAA's Office of Accident Investigation meet regularly to validate information on the number of accidents and initial results are considered preliminary. Numbers are final when the NTSB releases its report each March. NTSB continues to review accident results from FY 2005 and FY 2006. So in March 2007, FY 2005 accident numbers will be finalized. However, the number is not likely to significantly change from the end of each fiscal year to when the rate is finalized.

Reliability

FAA uses performance data extensively for program management and personnel evaluation and accountability. Most accident investigations are a joint undertaking between FAA and NTSB. NTSB has the statutory responsibility, but, in fact, most of the accident investigations related to general aviation are conducted by FAA Aviation Safety Inspectors without NTSB direct involvement. FAA's own accident investigators and other FAA employees participate in all accident investigations led by NTSB investigators.

SAFETY
General Aviation Alaska Accidents

Federal Aviation Administration

FY 2007 Performance Target

"Reduce accidents in Alaska for general aviation and all part 135 operations to no more than 110 per year."

Flight Plan Objective and Performance Target

Objective 2: Reduce the number of fatal accidents in general aviation.

Performance Target: By FY 2009, reduce accidents in Alaska for general aviation and all Part 135 operations from the 2000-2002 average of 130 accidents per year to no more than 99 accidents per year. This measure will be converted from a number to a rate after FY 2009. The targets for FY 2010-2011 are under development.

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Target	N/A	125	120	115	110
Actual	N/A	98[1]	128[2]	102[3]	

[1] Actual result revised from preliminary estimate of 99. Original preliminary estimate was 100, reduced to 99 in Summer 2005.
[2] Preliminary estimate until May 2007.
[3] Preliminary estimate until May 2008.

Definition of Measure

Unit of Measure: The total number of Part 135 and general aviation accidents in Alaska.

Computation: A count of the number of general aviation accidents in Alaska during the fiscal year.

Formula: N/A

Scope of Measure: This measure includes scheduled and non-scheduled FAR Part 135, as well as general aviation flights and includes both fatal and non-fatal accidents. This is not a sub-measure of the Reduce General Aviation Fatal Accidents performance target. Flight operations in Alaska are diverse and they are responsive to the Alaska's challenging aviation environment and its unique air transportation requirements. The Part 135 operations in Alaska are dominated by single-engine airplanes powered by a reciprocating engine, operated under visual flight rules (VFR), and crewed by one pilot. Operating in rough terrain, adverse weather, and in areas of extreme isolation increase the risks to safe flight operations. The General Aviation operators often use the same types of single-engine airplanes and cope with the same environmental factors as the Part 135 operators.

Why the FAA Chooses this Measure

Alaska relies heavily on air transportation in a difficult operating environment. This has led to an unacceptably high accident rate. Reducing accidents in Alaska will have an outsized effect on reducing Part 135 and general aviation accidents system-wide.

Source of the Data

The data on Part 135 and general aviation accidents come from the National Transportation Safety Board's (NTSB's) Aviation Accident Database. Aviation accident investigators under the auspices of the NTSB develop the data.

Statistical Issues

There is no major error in the accident counts. Random variation in air crashes results in a significant variation in the number of fatal accidents over time. The FAA would prefer to use a fatal accident rate rather than fatal accidents as the performance measure because the use of a rate measure takes into account variation in activity levels from year to year.

Also, unlike commercial aviation activity that is reported regularly to the Bureau of Transportation Statistics by the carriers, general aviation flight hours are based on an annual survey conducted by the FAA and response to the survey is voluntary. The accuracy of the flight hours collected is suspect and there is no readily available way to verify the data. For these reasons, the general aviation community is unwilling to use a rate measure until the validity and reliability of the survey data can be assured.

The general aviation community and the General Aviation Joint Steering Committee of the Safer Skies initiative recommend development of a data collection program that will yield more accurate and relevant data on general aviation demographics and utilization. Improved survey and data collection methodologies have been developed.

As a result of these efforts, FAA, working with the General Aviation Manufacturers Association, has made several improvements to the general aviation survey. First, the sample size has been significantly increased. Second, a reporting sheet has been created to make it much easier for organizations with large fleets to report. Third, the agency worked with the Aircraft Registry to improve the accuracy of contact information. As a result, a survey was completed in FY 2004 that, for the first time, creates a statistically valid report of general aviation activity that the general aviation community agrees on. The next step is to create the baseline and work with the community on a reasonable target for the rate.

Completeness

NTSB and FAA's Office of Accident Investigation meet regularly to validate information on the number of accidents. Results are considered preliminary. NTSB continues to review accident results from FY 2005 and FY 2006.

Numbers are final when the NTSB releases its report each March. So in March 2007, FY 2005 accident numbers will be finalized. However, the number is not likely to significantly change from the end of each fiscal year to when the rate is finalized.

Reliability

FAA uses performance data extensively for program management and personnel evaluation and accountability. Most accident investigations are a joint undertaking between FAA and NTSB. NTSB has the statutory responsibility, but, in fact, most of the accident investigations related to general aviation are conducted by FAA Aviation Safety Inspectors without NTSB direct involvement. FAA's own accident investigators and other FAA employees participate in all accident investigations led by NTSB investigators.

SAFETY
Runway Incursions

Federal Aviation Administration

FY 2007 Performance Target

"Reduce Category A and B (most serious) runway incursions to a rate of no more than 0.530 per million operations."

Flight Plan Objective and Performance Target

Objective 3: Reduce the risk of runway incursions.

Performance Target: By 2010, limit Category A and B (most serious) runway incursions to a rate of no more than 0.450 per million operations, and maintain or improve through FY 2011.

	FY 2003	FY 2004	FY 2005[1]	FY 2006	FY 2007
Target	44	40	36/0.557	0.551	0.530
Actual	32	28	29/0.460	0.507[2]	

[1]Target and result for FY 2005 were number of incursions, but rate was also reported. For FY 2006 and beyond, target will be a rate.
[2] Actual result revised from preliminary estimate of 0.458.

Definition of Measure

Unit of Measure: Rate of Category A & B (most serious) runway incursions per million operations.

Computation: The total number of Category A and B runway incursions is divided by the sum of the number operations divided by 1 million.

Formula:

$$\frac{\text{Number of A \& B Incursions}}{(\text{Operations Count}/1{,}000{,}000)}$$

Scope of Measure: A runway incursion is any occurrence at an airport involving an aircraft, vehicle, person, or object on the ground that creates a collision hazard or results in a loss of separation between aircraft taking off, intending to take off, landing, or attending to land at an airport. They are grouped in three general categories: operational errors, surface pilot deviations, and vehicle/pedestrian deviations. Runway incursions are reported and tracked at airports that have an operational air traffic control tower. Operations are defined as total takeoffs and landings.

The FAA tracks four categories of runway incursions - A, B, C, D - but includes only those with the highest risk of collision, Category A and B incursions, in the measure.

- Category A: Separation decreases to the point that participants take extreme action to narrowly avoid a collision, or the event results in a collision.
- Category B: Separation decreases, and there is a significant potential for a collision.
- Category C: Separation decreases, but there is ample time and distance to avoid a collision.
- Category D: There is little or no chance of collision, but the definition of a runway incursion is met.

In FY2002 FAA changed the focus of measurement for runway incursions from all incursions to those incursions with measurable risk of collision, Categories A and B. Since Category C and D incursions were not likely to lead to an accident or a significant risk of an accident, their inclusion in the previous total tended to mask true safety risk. The new measure reflects the focus of FAA's runway safety effort to reduce the rate of the incursions with demonstrable risk.

Why the FAA Chooses this Measure

Runway incursions create dangerous situations that can lead to serious accidents. Reducing the number of runway incursions lessens the probability of accidents that potentially involve fatalities, injuries, and significant property damage.

Source of the Data

Air traffic controllers and pilots are the primary source of runway incursion reports. The data are recorded in the FAA National Incident Monitoring System (NAIMS). Preliminary incident reports are evaluated when received and evaluation can take up to 90 days.

Statistical Issues

N/A

Completeness

The data are typically not finalized for 90 days following the close of the fiscal year. Surface operational error/deviation, surface pilot deviation, and vehicle/pedestrian deviation reports are reviewed on a daily basis to determine if the incident meets the definition of a runway incursion. Runway incursions are a subset of the incident data collected and the completeness of the data is based on the reporting requirements and completeness for each of the incident types.

Reliability

FAA uses performance data extensively for program management, personnel evaluation, and accountability in prioritizing its facility evaluations and audits. The data is also used on a daily basis to track progress of achieving performance goals. Annual runway incursion incident data are used to provide a statistical basis for research and analysis and outreach initiatives. The FAA verifies and validates the accuracy of the data through reviews or preliminary and final reports. Reconciliation of the databases is conducted monthly and anomalies are explored and resolved. In cases where major problems are identified, a request to re-submit is issued. The FAA conducts annual reviews of reported data and compares the data with data reported from previous years.

SAFETY
Commercial Space Launch Accidents

Federal Aviation Administration

FY 2007 Performance Target

"No fatalities, serious injuries, or significant property damage to the uninvolved public during licensed or permitted space launch and reentry activities."

Flight Plan Objective and Performance Target

Objective 4: Ensure the safety of commercial space launches.

Performance Target: No fatalities, serious injuries, or significant property damage to the uninvolved public during licensed or permitted space launch and reentry activities.

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Target	N/A	0	0	0	0
Actual	N/A	0	0	0	

Definition of Measure

Unit of Measure: Number of accidents resulting in fatalities, injuries, or significant property damage.

Computation: A numerical count of the number of accident occurrences.

Formula: N/A

Scope of Measure: This measure focuses only on commercial space launch or reentry activities licensed and monitored by the FAA. "Significant" property damage is defined as $25,000 or greater.

Why the FAA Chooses this Measure

Protecting the public during launch operations is a FAA safety mission objective. Commercial space transportation is the means by which payloads such as satellites and remote sensing devices are carried to orbit; these payloads have tremendous benefit to our society. Commercial space launch or reentry accidents can potentially have major catastrophic consequences, involving large losses of life and property. The uninvolved public expects to be protected from the potential dangers and hazards associated with commercial space launch and reentry activities. There has not been a single commercial space launch accident since the first DOT licensed launch took place in 1989, and DOT is working to keep this safety record perfect.

Source of the Data

The source of the data is the Office of the Associate Administrator for Commercial Space Transportation (AST). Specifically, AST monitors all licensed launch operations and maintains documented reports of each licensed event. These reports, which include all relevant details pertaining to the outcome of the licensed launch or reentry operation including the occurrence of any public fatalities, injuries, or property damage are generated by AST's assigned field inspectors and duty officers for a given launch event. AST will utilize other sources of data such as the launch vehicle operator, and federal, local and State government officials.

Statistical Issues

N/A

Completeness

AST's Licensing and Safety Division maintains and verifies reports that an accident resulting from a licensed launch operation has occurred and supports coordination with other federal agencies which may include the National Transportation Safety Board (NTSB) and the military on any subsequent investigations.

Reliability

If an accident occurs, the FAA and the NTSB will complete official reports fully documenting circumstances associated with the event.

SAFETY
Operational Errors

Federal Aviation Administration

FY 2007 Performance Target

"Reduce the rate of Category A and B (most serious) operational errors to a rate of no more than 4.27 per million activities."

Flight Plan Objective and Performance Target

Objective 5: Enhance the safety of FAA's air traffic systems.

Performance Target: Limit Category A and B (most serious) operational errors to a rate of no more than 4.27 per million activities through FY 2008.

	FY 2003	FY 2004	FY 2005[2]	FY 2006	FY 2007
Target	642	629	637/3.92	4.27	4.27
Actual[1]	679	638	681/4.27	4.09[3]	

[1] Results for FY 2002 – 2005 are revised from preliminary estimates.
[2] Target and result for FY 2005 were number of errors, but rate was also reported. For FY 2006 and beyond, target is a rate.
[3] Preliminary estimate. Final data available in January 2007.

Definition of Measure

Unit of Measure: Rate of category A & B (most serious) operational errors per million operations.

Computation: The total number of Category A & B operational errors is divided by the sum of the number of activities divided by 1,000,000.

Formula:

$$\frac{\text{Number of A \& B Errors}}{(\text{Operations Count}/1{,}000{,}000)}$$

Scope of Measure: An operational error is a violation of separation standards that define minimum safe distances between aircraft, between aircraft and other physical structures, and between aircraft and otherwise restricted airspace.

The severity of an operational error is determined by a point value established by the severity index. The severity index determines, for operational errors that occur in-flight, the gravity or degree of the violation of the separation standard. Categories within the severity index are determined by the sum of assigned values for vertical and lateral distances, closure rates, and flight paths. There are four categories of severity: Low (Category D), Moderate-Controlled (Category C), Moderate-Uncontrolled (Category B), and High (Category A). The level of air traffic control determines whether a specific flight is classified as Category B or C.

- Category A: Point values sum 90 points or higher.
- Category B: Point values sum 40 – 89 points, and the ATC control factor is uncontrolled.
- Category C: Point values sum 40 – 89 points, and the ATC control factor is controlled.
- Category D: Point values sum to 39 points or less.

Several procedures have been used to measure operational errors in the past. Before FY 2002, a straight count of all operational errors was used. This measure did not offer any differentiation between a technical violation and more severe operational errors. In FY 2002, only those operational errors with less than 80% separation were used as a control measure, with the presumption that this level of separation measured those operational errors with some degree of risk. Beginning in FY 2003, the focus was changed to measure those operational errors considered the most severe operational errors – those categorized as A or B.

Why the FAA Chooses this Measure

Separation is one of the fundamental principles of aviation safety – the need to maintain a safe distance from other aircraft, terrain, obstructions, and certain airspace not designated for routine air travel.

Source of the Data

The FAA's air traffic facilities have a software program called Operational Error Detection Patch (OEDP) that detects possible operational errors and sends alert messages to supervisory personnel. In addition, controllers are required to report operational errors. Facility management reviews OEDP alerts and data provided from the National Track Analysis Program (NTAP) to determine if an operational error has occurred. The information is summarized in the FAA Air Traffic Operational Error and Deviation Database.

Statistical Issues

N/A

Completeness

The data are typically not finalized for 90 days following the close of the fiscal year. The FAA's Air Traffic Order 7210.56 requires all facilities to submit operational error reports within 3 hours of the event. The FAA has implemented procedures that require facilities to conduct random audits of radar data to identify potential unreported operational errors. The FAA Headquarters also conducts random audits of selected facilities based on the identification of unreported events. Facility management and personnel are subject to punitive action for non-compliance in reporting operational errors.

Reliability

FAA uses performance data extensively for program management, personnel evaluation, and accountability in prioritizing its facility evaluations and audits. The data are also used on a daily basis to track progress of achieving performance goals. Annual operational error incident data are used to provide a statistical basis for research and analysis. The FAA verifies and validates the accuracy of the data through reviews or preliminary and final reports. Reconciliation of the databases is conducted monthly and anomalies are explored and resolved. In cases where major problems are identified, a request to re-submit is issued. The FAA conducts annual reviews of reported data and compares the data with data reported from previous years.

SAFETY
Safety Risk Management

Federal Aviation Administration

FY 2007 Performance Target

"Apply safety risk management to at least 3 significant changes in the National Airspace System (NAS)."

Flight Plan Objective and Performance Target

Objective 5: Enhance the Safety of FAA's air traffic systems.

Performance Target: By FY 2010, apply Safety Risk Management (SRM) to at least 19 significant changes in the NAS.

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Target	N/A	N/A	3	3	3
Actual	N/A	N/A	3	4	

Definition of Measure

Unit of Measure: The number of significant changes to the NAS in which the SRM process has been applied.

Computation: As a metric, the FAA will count the number of Safety Risk Management Documents (SRMDs), or safety cases, approved.

Formula: N/A

Scope of Measure: In FY 2004, the FAA developed the FAA SMS Manual. This manual describes the requirements for the various components/functions of the SMS, including safety risk management. The application of safety risk management will be measured against these requirements.

Since these are new requirements, training is necessary to allow the operational service units in the Air Traffic Organization (ATO) to meet them. The ATO will track who attends SMS and safety risk management training. In addition, the ATO Safety Service will measure/track the application of the safety risk management through reviewing data on changes to the NAS, identifying which are safety-significant, and auditing the application of safety risk management to those changes that are safety significant.

Why the FAA Chooses this Measure

Safety risk management is a systematic, explicit, and comprehensive approach for managing safety risk at all levels and throughout the entire scope of an operation and lifecycle of a system. It requires the disciplined assessment and management of safety risk. The safety risk management process ensures that safety-related changes are documented; risk is assessed and analyzed; unacceptable risk is mitigated; hazards are identified and tracked to resolution; the effectiveness of the risk mitigation strategies is assessed; and the performance of the change is monitored throughout its lifecycle. Applying safety risk management prior to implementing changes to the NAS will ensure that unacceptable risk is not introduced. It will also improve the documentation of the processes used to ensure the safety of the NAS.

The ATO will also track who attends SMS and safety risk management training. While this measure is not part of the Flight Plan SRM Performance target, the number of employees trained has a direct impact on the application of SRM to safety-significant changes. Personnel must be trained in SRM before they can be expected to complete the safety analysis required for SRM. The ATO Safety Service is working with the ATO Workforce Planning Directorate to track training attendance for both the SMS Overview course and the safety risk management. In addition, the Safety Service will measure and track the application of the SRM by reviewing data on changes to the NAS, identifying which are safety-significant, and auditing the application of safety risk management to those changes that are safety significant.

The SRM is a new requirement. While FAA organizations regularly apply processes to assure the safety of the NAS, these processes are not specifically included in SRM as described in the FAA SMS Manual. Given the FAA's decades long safety record, which has ensured that the NAS is among the safest airspace system in the world, SRM will build upon these existing processes. The targets were developed based on lessons learned from international service providers, as well as from similar organization-wide implementations in the FAA

Source of the Data

The ATO Safety Service is working with ATO operational service units to compile a repository of hazards associated with changes to the NAS in a database known as the FAA Hazard Tracking System. In addition, WebCM is being updated to require SRM on all NAS Change Proposals. These data will then be used to audit the application of safety risk management.

Statistical Issues

N/A

Completeness

Each ATO Service Unit is responsible for ensuring that safety analyses are documented, complete and accurate.

Reliability

ATO-S will approve certain SRMDs and will check for Service Unit compliance with SRM via an audit process that is currently in development.

CAPACITY
Average Daily Airport Capacity (35 OEP Airports)

Federal Aviation Administration

FY 2007 Performance Target

"Achieve an average daily airport capacity for the 35 Operational Evolution Plan (OEP) airports of 101,562 arrivals and departures per day."

Flight Plan Objective and Performance Target

Objective 1: Increase capacity to meet projected demand and reduce congestion.

Performance Target: Achieve an average daily airport capacity for the 35 OEP airports of 104,338 arrivals and departures per day by FY 2011.

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Target	N/A	N/A	99,892	101,191	101,562
Actual	98,488	100,041	101,463	101,932	

Definition of Measure

Unit of Measure: Average of daily arrival and departure rates.

Computation: Average Daily Airport Capacity is the sum of the daily hourly-called arrival and departure rates at the relevant airports per month, divided by the number of days in the month. The annual capacity level is the weighted sum of the monthly capacity levels.

Formula: $$\text{Monthly Avg Daily Airport Capacity} = \frac{\text{Daily Hourly Called Arrival \& Departure Rates}}{\text{Number of Days in the Month}}$$

Scope of Measure: Only the 35 airports in the OEP are included in this measure. Each airport facility determines the number of arrivals and departures it can handle for each hour of each day, depending on conditions, including weather. These numbers are the called arrival and departure rates of the airport for that hour. Data are summed for daily, monthly, and annual totals.

Why the FAA Chooses this Measure

Growth in air travel has generally been accomplished by increasing the number of flights. Measuring the growth of airport capacity indicates the limit at which increased service can be accommodated without affecting delay.

Source of the Data

The Aviation System Performance Metrics (ASPM) database, maintained by the FAA's Office of Aviation Policy and Plans, provides the data for this metric. By agreement with the FAA, ASPM flight data are filed by certain major air carriers for all flights to and from most large and medium hubs. These data are supplemented by flight records contained in the Enhanced Traffic Management System (ETMS) and flight movement times provided by Aeronautical Radio, Inc. (ARINC). Also included within ASPM are arrival and departure rates provided by the individual facilities.

Statistical Issues

N/A

Completeness

Fiscal year data are finalized approximately 90 days after the close of the fiscal year.

Reliability

The reliability of ASPM is verified on a daily basis by the execution of a number of audit checks, comparison to other published data metrics, and through the use of ASPM by over 1500 registered users.

CAPACITY
Annual Service Volume

Federal Aviation Administration

FY 2007 Performance Target

"Increase the Annual Service Volume (AVS) of the 35 OEP airports by at least 1%.

Flight Plan Objective and Performance Target

Objective 1: Increase capacity to meet projected demand and reduce congestion.

Performance Target: Commission six new runway projects, increasing the annual service volume of the 35 OEP airports by at least 1 percent annually, measured as a five-year moving average, through FY 2011.

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007[1]
Target	N/A	1.00% 2 runways	1.00% 0 runways	1.00% 4 runways	1.00% 2 runways
Actual	0.67% 3 runways	1.07% 2 runways	1.01% 0 runways	1.67% 4 runways	

[1] Target revised from 1 runway in FY 2007.

Definition of Measure

Unit of Measure: Number of additional annual aircraft operations that can be accommodated. Total of runway projects commissioned during the current fiscal year.

Computation: This measure is a 5-year moving average. The 1998 ASV is the base year. ASV is calculated using the Runway Delay Simulation Model (RDSIM). Delay curves are developed for each of the 35 OEP airports for the existing airport layout and with new runways where proposed. A consistent calculation technique to estimate capacity was used for all airports, based on demand schedules and fleet mixes, supplemented with flight counts and standard air traffic control procedures for each airport. For those airports where new runways are to be commissioned, the ASV can be estimated any time in the year that the runway will be opened.

Formula: N/A

Scope of Measure: This measure estimates the benefit, in terms of additional aircraft operations, from runway construction projects. A runway construction project includes new runways, runway extensions, and airfield reconfigurations. Aircraft operations include air carrier, commuter, air taxi, general aviation, and military aircraft. Only the 35 OEP airports are included in this measure.

Why the FAA Chooses this Measure

The ASV measure is intended to estimate and track the increase in airport capacity at airports. This measure is calculated as a five year moving average. It is calculated in this way to smooth out peaks and valleys associated with yearly variability in new runway openings. The 1998 ASV is the base year. There were no new runways opened in FY 1999, and one new runway in each of the fiscal years 2000, 2001, and 2002, which added 0.78% to the overall capacity total of those years. The FAA did not begin reporting on the increase until FY 2004. The moving average from FY 1998 through FY 2002 was an increase of 0.28%. In 2003, three new runways opened adding 2.51% more capacity resulting in a five year moving average of 0.67%. Two additional runways opened in FY 2004, adding an additional 1.91% to the Nation's total and resulting in a five year moving average of 1.07%. Four runways opened in FY 2006, adding 3.27% more capacity and resulting in a 5-year moving average of 1.67%.

Source of the Data

Demand schedules and fleet mixes are developed from recent Official Airline Guide (OAG) information Flight counts are obtained from airport traffic control tower logs. In addition, standard air traffic control procedures are used for each airport.

Statistical Issues

This measure is derived from model estimates that are subject to errors in model specification.

Completeness

The NAS Advanced Concept Branch (ACT-540) continues to provide technical support to develop a consistent method of calculating the individual airport ASV through the Office of System Capacity at the FAA Technical Center, Atlantic City, NJ.

Reliability

Recalculations of the original ASV studies have not been necessary. Once developed, the delay curves remain accurate unless a major change in fleet mix or operational characteristics occurs at an airport.

CAPACITY
Adjusted Operational Availability

Federal Aviation Administration

FY 2007 Performance Target

"Sustain adjusted operational availability at 99.7% for the reportable facilities that support the 35 OEP airports."

Flight Plan Objective and Performance Target

Objective 1: Increase capacity to meet projected demand and reduce congestion.

Performance Target: Sustain adjusted operational availability at 99.70 percent for the reportable facilities that support the 35 OEP airports through FY 2011.

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Target	N/A	99.00%	99.00%	99.50%	99.70%
Actual[1]	99.74%	99.72%	99.76%	99.79%[2]	

[1] Measure redefined in FY 2005 to exclude outages due to scheduled improvements. Results for FY 2003 – FY 2004 have been recalculated.
[2] Revised from preliminary estimate of 99.78%

Definition of Measure

Unit of Measure: Ratio of total available hours minus outage time to total available hours.

Computation: Adjusted Operational Availability (OA_{ADJ}) is calculated by dividing the maximum facility/service hours minus all outage time except for improvements (cause code 62 outages) by the total maximum facility/service hours, and multiplying by 100 to express the ratio as a percentage.

Formula:

$$OAADJ = \frac{\text{Total Available Hours - (Total Outage Time - Code 62 Outage Time)}}{\text{Total Available Hours}} \times 100$$

Scope of Measure: The National Airspace Performance Reporting System (NAPRS) facilities necessary to maintain the provision of service in the NAS overall have been determined and are monitored. For this measure, those NAPRS reportable facilities necessary for the provision of service at the 35 OEP airports have been separately measured. Time out of service is adjusted to exclude hours when equipment is unavailable due to scheduled improvement (cause code 62) down time.

Why the FAA Chooses this Measure

The availability of the equipment necessary to provide service directly affects the performance of the NAS. Loss of radar or communications equipment will affect the speed and number of aircraft that can be handled where that loss occurs. The ability of the NAS to continually provide guidance is crucial, and affects both safety and capacity. The adoption of this metric has the additional advantage of linking three capacity measures. On-Time NAS Arrivals are affected by the airport and en-route capacity, which are directly impacted by the availability of the equipment and facilities supporting that capacity.

Source of the Data

The National Airspace System Performance Analysis System (NASPAS). NASPAS was developed to analyze outages of the Air Traffic Control Facilities in the NAS maintained by the FAA. NASPAS receives monthly updates of outage data from the National Outage Database (NODB). The Maintenance Management System (MMS) contains individual equipment outage data as recorded by the system specialist.

Statistical Issues

N/A

Completeness

The FAA's Quality Assurance and Performance Team, under ATO-W, conducts a monthly review of all Log Interrupt Reports (LIRs) that are entered into the MMS to ensure the data, which resides in the NODB, are as complete and accurate as possible.

Reliability

The National Airspace System Performance Analysis System is the official source of equipment and service performance data for the Federal Aviation Administration.

CAPACITY
Average Daily Airport Capacity (7 Metro Areas)

Federal Aviation Administration

FY 2007 Performance Target

"Achieve an average daily airport capacity for the seven major metropolitan areas of 63,080 arrivals and departures per day."

Flight Plan Objective and Performance Target

Objective 1: Increase capacity to meet projected demand and reduce congestion.

Performance Target: Achieve an average daily airport capacity for the seven major metropolitan areas of 64,060 arrivals and departures per day by FY 2009, and maintain through FY 2011.

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Target	N/A	21,290	43,080	68,750	63,080
Actual[1]	21,147	21,233	44,324	69,630	

[1] Measure redefined in FY05 to include departures as well as arrivals. Results for FYs 2002 – FY 2004 are for original 'arrivals only' measure. A different selection of airports was included in the measure starting in FY 2006. In FY 2007 the measure was redefined again to remove the Atlanta area.

Definition of Measure

Unit of Measure: Average of daily arrival and departure rates.

Computation: Average Daily Airport Capacity is the sum of the daily hourly-called arrival and departure rates at the relevant airports per month, divided by the number of days in the month. The annual capacity level is the weighted sum of the monthly capacity levels.

Formula:

$$\text{Monthly Avg Daily Airport Capacity} = \frac{\text{Daily Hourly Called Arrival \& Departure Rates}}{\text{Number of Days in the Month}}$$

Scope of Measure: For FY 2007, only the airports in these seven areas are included in this measure: New York, Philadelphia, South Central Florida, Chicago, Washington/Baltimore, the Los Angeles Basin, and the San Francisco Bay Area. Each airport facility determines the number of arrivals and departures it can handle for each hour of each day, depending on conditions, including weather. These numbers are the called arrival and departure rates of the airport for that hour. Data are summed for daily, monthly, and annual totals.

Why the FAA Chooses this Measure

Growth in air travel has generally been accomplished by increasing the number of flights. Measuring the growth of airport capacity indicates the limit at which increased service can be accommodated without affecting delay. The selected seven metropolitan areas contain both the most congested airspace and the airports with the greatest constraints on airport expansion. Airport improvements, measured by increases in capacity at these airports, are likely to contribute the most to reduce the causes of system delay.

Source of the Data

The Aviation System Performance Metrics (ASPM) database, maintained by the FAA's Office of Aviation Policy and Plans, provides the data for this metric. By agreement with the FAA, ASPM flight data are filed by certain major air carriers for all flights to and from most large and medium hubs, and is supplemented by flight records contained in the Enhanced Traffic Management System (ETMS) and flight movement times provided by Aeronautical Radio, Inc. (ARINC). Also included within ASPM are arrival and departure rates provided by the individual facilities.

Statistical Issues

N/A

Completeness

Fiscal year data is finalized approximately 90 days after the close of the fiscal year.

Reliability

The reliability of ASPM is verified on a daily basis by the execution of a number of audit checks, comparison to other published data metrics, and through the use of ASPM by over 1500 registered users.

CAPACITY
NAS On-Time Arrivals

Federal Aviation Administration

FY 2007 Performance Target

"Achieve a NAS On-Time Arrival rate of 87.67% percent at the 35 Operational Evolution Plan (OEP) airports."

Flight Plan Objective and Performance Target

Objective 2: Increase reliability and on-time performance of scheduled carriers

Performance Target: Achieve a NAS on-time arrival rate of 88.76 percent at the 35 OEP airports by FY 2011.

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Target[1]	78.20%	82.10%	87.40%	87.40%	87.67%
Actual	82.30%	79.07%	88.44%	88.36%	

[1] Measure and target redefined in FY 2005 to exclude delays not NAS-related – see Computation section below. Targets and results for FY 2003 – 2004 are for original measure.

Definition of Measure

Unit of Measure: Percentage of flights arriving no more than 15 minutes late.

Computation: NAS On-Time Arrival is the percentage of all flights arriving at the 35 OEP airports equal to or less than 15 minutes late, based on the carrier flight plan filed with the FAA, and excluding minutes of delay attributed by air carriers to weather, carrier action, security delay, and prorated minutes for late arriving flights at the departure airport. The number of flights arriving on or before 15 minutes of flight plan arrival time is divided by the total number of completed flights.

Formula:

$$\frac{\text{NAS On - Time Flights}}{\text{Total Flights}}$$

Scope of Measure: A flight is considered on time if it arrives no later than 15 minutes after its published, scheduled arrival time. This definition is used in both the DOT Airline Service Quality Performance (ASQP), and Aviation System Performance Metrics (ASPM) reporting systems. Air carriers, however, also file up-to-date flight plans for their services with the FAA that may differ from their published flight schedules. This metric measures on-time performance against the carriers filed flight plan, rather than what may be a dated published schedule.

The time of arrival of completed passenger flights to and from the 35 OEP airports is compared to their flight plan scheduled time of arrival. For delayed flights, delay minutes attributable to extreme weather, carrier caused delay, security delay, and a prorated share of delay minutes due to a late arriving flight at the departure airport are subtracted from the total minutes of delay. If the flight is still late, it is counted as a delayed flight attributed to the National Aviation System (NAS) and the FAA.

Why the FAA Chooses this Measure

On-Time performance is a measure of the ability of the FAA to deliver services. A major weakness of using air carrier scheduled on-time performance as a metric is that it contains flight delays caused by incidents outside the FAA's control. However, the air carriers have supplied the causation of flight delay, by flight, since June 2003 under revised Part 234 instructions. Removal of delays not attributable to the FAA provides a more accurate and equitable method of measuring the FAA's performance.

Source of the Data

The Aviation System Performance Metrics (ASPM) database, maintained by the FAA's Office of Aviation Policy and Plans, supplemented by DOT's Airline Service Quality Performance (ASQP) causation database, provides the data for this metric. By agreement with the FAA, ASPM flight data are filed by certain major air carriers for all flights to and from most large and medium hubs, and is supplemented by flight records contained in

the Enhanced Traffic Management System (ETMS) and flight movement times provided by Aeronautical Radio, Inc. (ARINC).

Statistical Issues

Data are not reported for all carriers, only the 19 carriers reporting monthly into the ASQP reporting system.

Completeness

Fiscal year data are finalized approximately 90 days after the close of the fiscal year.

Reliability

The reliability of ASPM is verified on a daily basis by the execution of a number of audit checks, comparison to other published data metrics, and through the use of ASPM by over 1500 registered users. ASQP data is filed monthly with DOT under 14 CFR Part 234, Airline Service Quality Performance Reports, which separately requires reporting by major air carriers on flights to and from all large hubs.

CAPACITY
Noise Exposure

Federal Aviation Administration

FY 2007 Performance Target

"Reduce the number of people exposed to significant noise, as measured by a three-year moving average, to 8% below the three-year average for calendar years 2000-2002."

Flight Plan Objective and Performance Target

Objective 3: Address environmental issues associated with capacity enhancements.

Performance Target: Reduce the number of people exposed to significant noise by 4 percent each year through FY 2011, as measured by a three-year moving average, from the base-year average for 2000-2002.

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Target	- 1.00%	- 2.00%	- 3.00%	-4.00%	-8.00%[3]
Actual	- 15.00%[1]	- 28.00%[1]	- 29.00%[2]	-26.00%[3]	

[1] Revised in FY 2005.
[2] Revised in FY 2006.
[3] Revised in FY 2007.

Definition of Measure

Unit of Measure: Percent reduction in the number of people in the U.S. exposed to significant aircraft noise levels as measured by a three-year moving average from the base year average of 2000 to 2002. In FY 2007, the noise exposure target was revised from a 1% to a 4% cumulative reduction per year in the number of people exposed to significant aircraft noise.

Computation: The estimates of the number of people exposed to significant noise are calculated from the Model for Assessing Global Exposure to the Noise of Transport Aircraft (MAGENTA). The computational core of MAGENTA is FAA's Integrated Noise Model (INM), the most widely used computer program for the calculation of aircraft noise around airports. Major assumptions on local traffic utilization come from obtaining INM datasets that were developed for an airport.

The MAGENTA model calculates individual DNL contours for the top 96 US airports using INM. The contours are superimposed on census data to calculate the number of people within the DNL 65 dB contour at each airport. For smaller airports, a procedure is used where contour area is calculated from airport operations data using a statistical relationship. The contours areas are then used to calculate people exposed using census population densities. The individual airport exposure data is then summed to the national level. Finally, the number of people relocated through the Airport Improvement Program is subtracted from the total number of people exposed.

Formula: The number of people exposed to significant aircraft noise is calculated as follows:

$$\sum_{i=1}^{261} POP65_i - \sum_{j=1}^{9} POPREL_j$$

Where, $POP65_i$ is the number of people residing in the DNL 65 dB contour at the i^{th} MAGENTA airport as of the 2000 Census. $POPREL_j$ is the number of people relocated from the DNL 65 dB contour in the jth FAA region since the year 2000.

Scope of Measure: The measure tracks the residential population exposed to significant aircraft noise around U.S. airports. Significant aircraft noise is defined as aircraft noise above a Day-Night Sound Level (DNL) of 65 decibels. Exposure in a given year is reported as a three-year historical average. For example, exposure in 2003 is reported as the three-year average of 2001 to 2003. In 1981, the FAA issued 14 CFR Part 150,

Airport Noise Compatibility Planning, and as part of that regulation, formally adopted Day Night Sound Level. Day Night Sound level, abbreviated as DNL and symbolized as Ldn, is the 24-hour average sound level, in decibels (dB), obtained from the accumulation of all events with the addition of 10 decibels to sound levels in the night from 10 PM to 7 AM. The weighting of the nighttime events accounts for the increased interfering effects of noise during the night when ambient levels are lower and people are trying to sleep. In the promulgation of 14 CFR Part 150, the FAA also published a table of land uses that are compatible or incompatible with various levels of airport noise exposure in DNL. This table established that levels below DNL 65 dB are considered compatible for all indicated land uses and related structures without restriction.

Why the FAA Chooses this Measure

Mitigating noise directly impacts our ability to increase capacity. Although building new runways is the best way to increase capacity, communities and local government are reluctant to build them if they impose increased aircraft noise exposure. By mitigating and reducing exposure to excessive noise, FAA can help communities accept more runways in their areas.

The number of people exposed to significant noise levels was reduced by about 90 percent between 1975 and 2000. This is due primarily to the legislatively mandated transition of airplane fleets to newer generation aircraft that produce less noise. Most of the gains from quieter aircraft were achieved by FY 2000. The remaining problem must be addressed primarily through airport-specific noise compatibility programs. The FAA pursues a program of aircraft noise control in cooperation with the aviation community. Noise control measures include noise reduction at the source, i.e., development and adoption of quieter aircraft, soundproofing and buyouts of buildings near airports, operational flight control measures, and land use planning strategies. The FAA is authorized to provide funds for soundproofing and residential relocation, but each project must be locally sponsored and be part of a noise compatibility program prepared by the airport sponsor and approved by the FAA.

The FAA increased the noise exposure target in 2007 to a 4% cumulative reduction per year. The target is still calculated using a three year moving average from the 2000 to 2002 base average years. The FAA increased the noise exposure target after reviewing historical reductions and taking into account recent trends that remain well below the previous noise target. The significant reduction in noise exposure since the 2000 to 2002 base year average has been driven by air carrier fleet and operational changes that took place in the aftermath of September 11, 2001. It was expected that a return to more typical fleet compositions and a return to air traffic growth would narrow the “positive gap”. However, the return of fleet composition and air traffic to pre 9/11 levels has not occurred at the pace expected. In addition to noise trends, the new noise target reflects the relocation of people away from areas of significant noise exposure through grant funding. The target is also influenced by market forces that drive changes in commercial aircraft fleets and operations.

Environmental trends based on expansion of the U.S. air transportation system show that noise exposure is likely to move upwards as traffic growth continues – even taking into account forecasted fleet changes and implementation of beneficial new air traffic procedures. The agency’s ability to develop next generation technologies and have the broadest possible array of available noise mitigation approaches at its disposal will affect FAA’s ability to continue making significant improvements in aviation noise exposure. The FAA has proposed to Congress in its reauthorization legislation, provisions to create a research consortium whose purpose would be to accelerate the development of lower noise and emissions technologies for airframes and aircraft engines and to provide additional support for noise abatement flight procedures and land use planning and projects. It will be important for state and local land use planning to include appropriate consideration of noise-compatible land uses near airports.

Source of the Data

In 1997, the FAA initiated a project to collect airport noise analysis databases for a large number of the world’s airports. This sample database of airports would be the basis for assessing worldwide trends that would occur as the result of stringency, different land-use planning initiatives and operational procedures. The objective was to develop a tool that could be used by the Committee on Aviation Environmental Protection (CAEP) under the International Civil Aviation Organization (ICAO). Previous attempts by CAEP to globally assess aircraft noise exposure had limited success. The proposed FAA methodology had much more promise, as the number of sample databases was large and has since grown to around 200. Furthermore, a generalized methodology was included to account for airports for which noise databases did not exist. Based

on the initial success of the FAA activity, the fourth meeting of CAEP (CAEP4) recommended that a task group be formed to complete the development of this tool for CAEP analysis.

This group and subsequently the model became known as MAGENTA (Model for Assessing Global Exposure form Noise of Transport Airplanes). The MAGENTA population exposure methodology has been thoroughly reviewed by this ICAO task group and was validated for several airport specific cases. MAGENTA played an important role in the setting of new international aircraft noise standards by CAEP in 2001. CAEP used MAGENTA to assess the benefits (reduction in number of people exposed to aircraft noise) of several noise stringency proposals. FY 2000 was the first year MAGENTA was used to track the aircraft noise exposure goal in the DOT Performance Plan.

A U.S. version of the global MAGENTA model, which used input data to determine the noise exposure in the U.S. on aircraft and operations specific to U.S. airports, was developed in 2002. This version of the MAGENTA model uses updated population data from the 2000 Census. It has evolved over time as more comprehensive databases were incorporated to improve the accuracy of the model. The data source for airport traffic changed from the Official Airline Guide (OAG) to the FAA Enhanced Traffic Management System (ETMS). Unlike OAG, the ETMS database includes unscheduled air traffic, which allows for more accurate modeling of freight, general aviation, and military operations. The ETMS also provides more details on aircraft type for a more accurate distribution of aircraft fleet mix. Under the old model, unscheduled traffic was estimated and adjustments in the number of people exposed were made at the national level.

The general, regional FESG forecast used in the CAEP version of MAGENTA was also replaced in the new version by the FAA Terminal Area Forecast (TAF), which provides current and accurate information on how operations will increase on an airport specific basis. Since ETMS does not provide current data, FAA uses TAF to project flight operations. Therefore, the current year's result is classified as preliminary until the following year when projected data is finalized.

Data on the number of people relocated through the Airport Improvement Program are collected from FAA regional offices. Local traffic utilization data are collected from individual airports and updated periodically.

Statistical Issues

This measure is derived from model estimates that are subject to errors in model specification. The FAA has replaced the actual number of people exposed to significant noise with the percent decrease in the number of people exposed, measured from the three-year average for calendar year 2000-2002. Moving to the 3-year average stabilizes noise trends, which can fluctuate from year to year and are affected by unusual events such as the 9/11 attacks and the subsequent economic downturn. The 2000–2002 base time periods includes these events and is the same 3-year period used for the emissions goal.

The move from actual numbers to percent helps avoid confusion over U.S. noise exposure trends caused by annual improvements to the noise exposure model. A major change to MAGENTA (Model for Assessing the Global Exposure of Noise because of Transport Airplanes) resulted in a significant improvement in the estimate of the number of people exposed to significant noise levels around US airports. Until now, the scope of the measure included scheduled commercial jet transport airplane traffic at major U.S. airports. With access to better operational data sources, the scope of the MAGENTA calculation has expanded to include unscheduled freight, general aviation, and military traffic. The expanded scope of operations results in an increase in the estimate of the number of people exposed to significant noise.

The growth in the number of people exposed to significant noise results from improvements in measurement, not a worsening in aviation noise trends. Planned improvements to MAGENTA will continue to increase the estimate of the number of people exposed to aircraft noise, giving the false impression that aircraft noise exposure is increasing. Changing the noise performance goal to an annual percent change in aircraft noise exposure will better show the trend in aircraft noise exposure. The change will also make the Government Performance Review Act (GPRA) goal consistent with FAA's *Flight Plan* goal.

Completeness

No actual count is made of the number of people exposed to aircraft noise. Aircraft type and event level are current. However, some of the databases used to establish route and runway utilization were developed from 1990 to 1997, with many of them now over seven years old. Changes in airport layout including expansions may not be reflected. The FAA continues to update these databases as they become available. The benefits of federally funded mitigation, such as buyout, are accounted for.

The noise studies obtained from U.S. airports have gone through a thorough public review process; either under the National Environmental Policy Act (NEPA) requirements or as part of a land use compatibility

program.

Performance measure data for the current year (forecasted data) are calculated and reported during the period of July and August, and the data are finalized by May of the following reporting year.

Reliability

The Integrated Noise Model (the core of the MAGENTA model) has been validated with actual acoustic measurements at both airports and other environments such as areas under aircraft at altitude. External forecast data are from primary sources. The MAGENTA population exposure methodology has been thoroughly reviewed by an ICAO task group and was most recently validated for a sample of airport-specific cases.

CAPACITY
Aviation Fuel Efficiency

Federal Aviation Administration

FY 2007 Performance Target

"*Improve aviation fuel efficiency per revenue plane-mile by 5 percent, as measured by a three-year moving average, from the three-year average for calendar years 2000-2002.*"

Flight Plan Objective and Performance Target

Objective 3: Address environmental issues associated with capacity enhancements.

Performance Target: Improve aviation fuel efficiency per revenue plane-mile by 1 percent each year through FY 2011, as measured by a three-year moving average, from the three-year average for calendar years 2000-2002.

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Target	N/A	- 1.00%	- 2.00%	-3.00%	-5.00%
Actual	N/A	- 3.46%[1]	- 5.84%	-8.23%	

[1] Revised in FY 2005, due to improvement in model used to calculate fuel efficiency. Original result was -4.51%.

Definition of Measure

Unit of Measure: Percentage reduction in grams of fuel burned per kilometers flown.

Computation: FAA measures this target using SAGE – the System for assessing Aviation Global Emissions, which is a computer model that estimates aircraft fuel burn and emissions for variable-year inventories and for operational, policy, and technology-related scenarios. For this target, SAGE is used to generate annual fuel burn and total distance flown data for all U.S. commercial operations.

In FY 2004, baseline fuel efficiency was calculated by averaging fuel burn for calendar years 2000-2002 and then dividing by average total distance flown. FY 2004 performance was calculated for the three years (2001-2003) by dividing average fuel burn by average total distance to determine the three-year efficiency average. Further, operational data calculations from one representative week during the month of May indicated FY 2004 performance to be a 4.51% improvement in fuel efficiency for the three year efficiency average (2001-2003) as compared to the baseline.

For FY 2005 performance, an enhanced SAGE model was used which allowed analysis of full year operational data. For comparative consistency the analysis completed under the FY 2004 Flight Plan including the baseline fuel efficiency was re-computed.

For FY 2005 performance the three-year average for 2002-2004 was calculated and compared against the revised baseline and FY 2004 performance for trend analysis. SAGE calculated the amount of fuel burned in teragrams (Tg), equal to 10^{12} grams, and distance in nautical miles. The distance data are converted to billions of kilometers to facilitate the efficiency calculation in terms of Tg of fuel burned per billions of kilometers flown, or Tg/Bk. The baseline for this performance target was calculated by averaging the annual SAGE-generated fuel burn for calendar years 2000, 2001, 2002 and dividing by the average total distance flown over that three year period (68.27Tg/14.77Bk = 4.62 Tg/Bk).

FY 2004 performance was re-calculated based upon full year operational data for the three calendar year period of 2001, 2002, 2003 and dividing by the average total distance flown over that three-year period (65.36Tg/14.66Bk = 4.46 Tg/Bk). FY 2005 performance was calculated based upon full year operational data for the most recent three years (2002, 2003, 2004) and dividing average fuel burn by average

total distance to determine the three year efficiency average (65.40Tg/15.05Bk = 4.35 Tg/Bk).

FY 2006 performance was calculated based upon full year operational data for the three calendar year period of 2003, 2004, and 2005, dividing average fuel burn by average total distance to determine the three year efficiency average of (67.90Tg/16.02Bk = 4.24 Tg/Bk). This efficiency average was compared against the baseline efficiency (from 2000, 2001, 2002) of 4.62 Tg/Bk. With the baseline considered to be 100%, the three-year efficiency average for each performance period is compared to determine the percentage improvement of aviation fuel efficiency.

Formula:

$$\text{Efficiency} = \frac{\text{Average Fuel Burn (Tg)}}{\text{Average Distance (billions of kilometers)}}$$

(Fuel Burn values in Tg where 1 Tg = 10^{12} g)

Scope of Measure: This measure focuses on all U.S. commercial operations.

Why the FAA Chooses this Measure

Although today's aircraft are up to 70% more efficient than early commercial jet aircraft, there is growing attention being given to aviation's impact on the environment. Aviation is currently viewed as a small contributor to those greenhouse gas emissions that have the potential to influence global climate. However the science involved with these emissions in the upper atmosphere is still evolving and many uncertainties still exist. Carbon dioxide (CO_2) emissions are a primary greenhouse gas and are directly related to the fuel burned during the aircraft's operation.

Measuring and tracking fuel efficiency from aircraft operations allows FAA to monitor improvements in aircraft/engine technology and operational procedures and enhancements in the airspace transportation system. This information provides an assessment of their influence on reducing aviation's emissions contribution.

Source of the Data

The SAGE system uses radar-based data from the Enhanced Traffic Management System (ETMS) and Official Airline Guide (OAG) schedule information to generate annual inventories of fuel burn and total distance flown data for all U.S. commercial operations.

Statistical Issues

Potential seasonal variability and variability from year to year can be expected when analyzing air traffic data and commercial operations. Use of the statistical measure of a three-year moving average based upon analysis of annual operations should address this variability.

The extent to which enhancements are incorporated to improve model accuracy, via more robust aerodynamic performance modeling algorithms and database of aircraft/engine fuel burn information, will impact the overall results and thus the performance target. This could create some statistical variability from year to year if not properly taken into account. In cases where such enhancements have the potential to create a significant shift in baseline, annual inventories may need to be re-processed and/or adjusted to ensure consistency and accuracy of results.

The extent to which aircraft fleet improvements cannot be sufficiently modeled because of a lack of manufacturer proprietary data may also influence the performance target results. In this case, attempts will be made to characterize such aircraft with the best publicly available information, recognizing that newer aircraft types in the fleet will likely exist in significantly lesser numbers, thus minimizing the influence upon the results.

Completeness

Data used to measure performance against the target is assessed for quality control purposes. Input data for the SAGE model are validated before proceeding with model runs. Radar data from the ETMS are assessed to remove any anomalies, check for completeness, and pre-processed for input to the SAGE model. ETMS data are verified against the OAG information in order to avoid any duplication of flights in the annual inventory.

In some cases ETMS data lack appropriate fields to conduct quality control and in these cases the data is removed. Data from the SAGE model is verified by comparing output from previous years and analyzing

trends to ensure that they are consistent with expectations. In other cases monthly inventories may be analyzed to validate the results. Model output is subsequently post-processed through excel worksheets to perform the calculations for the performance target. Formulae and calculations are checked in order to ensure accuracy.

Full documentation of this target is determined when the annual inventories have been accomplished and the post-processing calculations have been completed, resulting in a percentage reduction in fuel efficiency relative to the baseline. The standard for this documentation is set by the FAA Office of Environment and Energy, which is separate from the organization (DOT Volpe National Transportation Systems Center) responsible for input and output associated with the SAGE model runs and annual inventories.

Reliability

The measuring procedure used for this performance target is highly reliable. That is to say that the processing of data through the SAGE model including the performance of algorithms is not subject to random factors that could influence the results. However, this performance target is potentially influenced by factors outside the control of the FAA. For example a major sustained disruption or enhancement in air traffic and/or a significant shift in commercial operations amongst airlines, including changes in fleet composition and missions could have a profound impact upon the performance target.

The FY 2006 performance results should not be used as an indicator of future performance. The fuel efficiency improvements indicated by this result are still being influenced by air carrier fleet and operational changes that took place in the aftermath of September 11, 2001. It is expected that a return to more typical fleet compositions and flight mission length distributions, along with air traffic growth, will result in degradations of fuel efficiency that may not be fully offset by improvements in airframe and engine technologies.

FY 2007 Performance Target

"Assist China in implementing at least seven of the mutually agreed upon safety enhancements to China's aviation system."

Flight Plan Objective and Performance Target

Objective 1: Promote improved safety and regulatory oversight in cooperation with bilateral, regional, and multilateral aviation partners.

Performance Target: Work with the Chinese aviation authorities and industry to adopt 27 proven Commercial Aviation Safety Team (CAST) safety enhancements by FY 2011. This supports China's efforts to reduce fatal accidents to a rate of 0.030 fatal accidents per 100,000 departures by FY 2012.

	FY 2003	FY 2004	FY 2005	FY 2006[1]	FY 2007[2]
Target	N/A	N/A	N/A	N/A	7 CAST Recs
Actual	N/A	N/A	N/A	N/A	

[1] For FY 2006, the target was to reduce the commercial air carrier fatal accident rate in China below 0.060 per 100,000 departures. The target was achieved.
[2] Measure redefined for FY 2007.

Definition of Measure

Unit of Measure: Number of CAST safety enhancements implemented by China.

Computation: The completion of each separate CAST safety enhancement. A total of 27 CAST safety enhancements have been selected for China over five years.

Formula: Number of CAST safety enhancements implemented by China.

Scope of Measure: There are 27 CAST safety measures that have been selected for China.[1] CAST has many more to choose from, but China agreed to start by implementing these 27.

Why the FAA Chooses this Measure

Initially, FAA used a commercial fatal accident rate in China to measure this objective. This was a five-year rolling average. There were several problems with this measure. First, there was very little the United States and the FAA could do to influence this rate. The rate was so low, with relatively little traffic, that any accident at all would cause the FAA to fail. Second, the FAA felt it was a mistake to impose accident rate targets onto other sovereign nations. Finally, with a rate target, there was little the FAA could measure that was in its control.

Therefore, after much research, we believe that the selection of CAST Safety Enhancements is a better choice. CAST identifies precursors and contributing factors to ensure that resources address the most prevalent categories of accidents. These safety enhancements have contributed significantly to the safety improvement of the United States commercial aviation system. Therefore, we believe that China's adoption of these standards will enhance safety over time. Second, this is easily measurable. There is a universe of 27 enhancements that China has selected.

Source of the Data

Proof of implementation will come from a variety of sources, including, but not limited to: email from US officials who have attended meetings with Chinese aviation officials, minutes of meetings with the Chinese Aviation Administration (CAA), and pronouncements by senior Chinese officials.

Statistical Issues

Because China is a sovereign nation, we do not have the means to independently verify implementation of these initiatives throughout China. However, the Chinese in the past have been very conscientious about commercial aviation safety. As the fastest growing commercial fleet in the world, China has maintained an impressive accident rate.

Completeness

There are no completeness data issues associated with this measure since it is a simple count of the projects completed.

Reliability

Again, we are relying on the words and deeds of Chinese officials. Over time, verification will come when the accidents that the Chinese do have do not display the precursors that the CAST safety enhancements are designed to prevent.

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[1] The 27 CAST safety enhancements are:

1. SE-1, TAWS
2. SE-2, SOP's
3. SE-3, Precision-like approach
4. SE-11, CRM
5. SE-12, CFIT training
6. SE-14 Safety Culture
7. SE-15, Safety Culture
8. SE-16, Safety Culture
9. SE-23, Approach and Landing training
10. SE-26, Loss of Control SOP's
11. SE- 27, Risk Assessment
12. SE-28, Safety Information
13. SE-30, Human Factors (awaiting development of material by CAST)
14. SE-31, Airplane Upset Recovery training
15. SE-10, Proactive Safety Programs
16. SE-29, Safety Information
17. SE-9, MSAW
18. SE-13, ATC training - CFIT prevention
19. SE-46, Runway Incursion - ATC
20. SE-47, Runway Incursion - ATC
21. SE-49, Runway Incursion – SOP template
22. SE-50, Runway Incursion - SOP GA operations (low priority in NARAST)
23. SE-51, Runway Incursion - SOP 'best practices'
24. SE-52, Runway Incursion - SOP vehicle operations
25. SE-55, Runway Incursion – ATC situational Awareness
26. SE-59, Runway Incursion – ATC 'read-back'
27. SE-60, Runway Incursion - Pilot Training

INTERNATIONAL LEADERSHIP
Bilateral Safety Agreements

Federal Aviation Administration

FY 2007 Performance Target

"Conclude at least three (new or expanded) bilateral safety agreements that will facilitate an increase in the ability to exchange aviation products and services."

Flight Plan Objective and Performance Target

Objective 1: Promote improved safety and regulatory oversight in cooperation with bilateral, regional, and multilateral aviation partners.

Performance Target: Conclude at least eight (new or expanded) bilateral safety agreements that will facilitate an increase in the ability to exchange aviation products and services by FY 2011.

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Target	N/A	2	2	2	3
Actual	N/A	3	2	4	

Definition of Measure

Unit of Measure: Number of executive agreements signed and/or implementation procedures agreements concluded.

Computation: Evidence of a signed executive agreement and/or evidence of the conclusion of an implementation procedure.

Formula: N/A

Scope of Measure: U.S. Bilateral Agreements related to aviation safety have two components: executive agreements and implementation procedures. The executive agreement is signed by the Department of State and the target country's Ministry of Foreign Affairs. It lays the essential groundwork for cooperation between the two governments and their respective aviation authorities. The second component of this the implementation procedures provide detailed operational safety and certification arrangements between the FAA and the target country's civil aviation authority. The implementation procedure is the operational portion of the bilateral agreement that allows for acceptance of aviation goods and services between the two countries. The target is achieved when either a new executive agreement is signed or a new or expanded implementation procedure is signed, or all substantive issues relating to the content of the agreement are completed with the target country or regional authority. (Interim measures related to the progress of negotiations may also be tracked for internal purposes during a specific fiscal year.)

Why the FAA Chooses this Measure

The purpose of a Bilateral Aviation Safety Agreement (BASA) is to promote aviation safety and environmental quality and to enhance cooperation and increase efficiency in matters related to civil aviation worldwide. Increasing globalization of aircraft manufacturing and airline operations and the interdependency between the United States and the foreign aviation sector is outpacing the FAA's ability to conduct oversight throughout the globe. By building a global network of competent civil aviation authorities and concluding agreements with additional countries and/or regional authorities, the FAA can have a significant impact on improved global understanding of U.S. safety regulations leading to more consistent international oversight.

BASAs are based on the recognition of comparability of the U.S. and foreign systems. They allow the FAA to rely upon the safety oversight capabilities and technical expertise of foreign civil aviation authorities, thereby minimizing duplication of efforts and opening new lines of communication. The FAA can then better focus on U.S. safety priorities while relying on competent foreign civil aviation authorities for those activities taking place overseas.

Source of the Data

The executive agreements are negotiated and maintained by the Department of State. The implementation procedures are negotiated and concluded by FAA. The official signed document is maintained at the FAA.

Statistical Issues

None.

Completeness

There are no completeness data issues associated with this measure since it is a simple count of the final signed new executive agreement or implementation procedures agreement.

This performance target is monitored monthly by tracking interim negotiation steps leading to completion of a BASA and tracking FAA internal coordination of the negotiated draft text.

The final signing of executive agreements is generally out of the control of the FAA. Many sovereign nations view these agreements as treaties that require legislative approval. The FAA and U.S. Government cannot control the timing of legislatures in other countries. Therefore, FAA counts executive agreements only when signed. The negotiation of implementation procedures is more within FAA's control.

The signed document of the executive agreement constitutes evidence of completion. For implementation procedures, evidence will be either a signed procedure or some form of agreement between both parties that material negotiations are concluded, but a formal signing ceremony is pending. This can take the form of an e-mail, meeting minutes, or other mutual agreement between the two parties that the implementation procedures activity has been concluded.

Reliability

N/A

INTERNATIONAL LEADERSHIP
External Funding

Federal Aviation Administration

FY 2007 Performance Target

"Secure $12 million in international aviation development funding to strengthen the global aviation infrastructure."

Flight Plan Objective and Performance Target

Objective 1: Promote improved safety and regulatory oversight in cooperation with bilateral, regional, and multilateral aviation partners.

Performance Target: Secure a yearly increase in international aviation development funding to strengthen the global aviation infrastructure. Achieve a 100% increase of the FY 2007 baseline target of $12 million in $3 million annual increments for an FY 2011 target of $24 million.

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Target[1]	N/A	$6.00M	$14.36M	$23.41M	$12.00M
Actual[1]	N/A	$11.97M [2]	$19.51M	$33.04M	

[1] Previously reported as annual percentage change. Beginning in FY07, reported in dollars. Prior years converted to dollars. FY07 target reduced from 20% increase over previous year result to adjust for unusually high FY06 level resulting from one-time grant of $25M for Afghanistan.
[2] Revised in FY05 from preliminary result.

Definition of Measure

Unit of Measure: Funding level in dollars.

Computation: Sum of total funding level is calculated.

Formula: N/A

Scope of Measure: The success of this effort is measured in terms of the amount of new funding which the agency secures for international aviation infrastructure projects. The important metric is the amount of external funding that the FAA identifies and directs toward critical aviation infrastructure projects. For example, the FAA has secured funding from the U.S. Agency for International Development to support efforts to rehabilitate Afghanistan's civil aviation system. Additionally in FY 2005, the FAA collaborated with the U.S. Trade and Development Agency to fund a seminar in the Asia Pacific region to promote new aviation technologies.

Why the FAA Chooses this Measure

Often countries that could benefit the most from FAA technical assistance are the least able to afford it. This Flight Plan initiative seeks to leverage the limited resources that FAA is able to contribute and provides program management of additional support from third party providers.

Source of the Data

The Office of International Aviation (API) develops the funding proposals, puts forward recommendations to funding organizations, and works closely with these sources to finalize the funding for each project.

Statistical Issues

None.

Completeness

API tracks the progress of all funding proposals that FAA develops and supports. The funding secured from these proposals are the items used to measure success.

Reliability

Public documents (press releases, letters, contracts, memorandums of agreement, etc.) are used to verify the figures for this Flight Plan initiative.

INTERNATIONAL LEADERSHIP
NextGen Technologies

Federal Aviation Administration

FY 2007 Performance Target

"Expand the use of Next Generation Air Transportation System (NextGen) performance-based systems to one priority country."

Flight Plan Objective and Performance Target

Objective 2: Promote seamless operations around the globe in cooperation with bilateral, regional, and multilateral aviation partners.

Performance Target: By FY 2011, expand the use of Next Generation Air Transportation System (NextGen) performance-based systems to five priority countries.

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Target[1]	N/A	N/A	1	1	1
Actual	N/A	N/A	1	1	

[1] Focus of measure changed from U.S. NAS technologies to GPS-based technologies and procedures in FY06 and to NextGen technologies in FY 2007. FY05 results are for original measure.

Definition of Measure

Unit of Measure: Total number of countries taking a significant step, as a result of FAA assistance and collaboration, to implement the operational use of NextGen technologies, procedures, or concepts.

Computation: A count of the countries involved with FAA on technical assistance or general cooperation that have achieved significant implementation milestones on NextGen technologies, procedures, or concepts.

Formula: N/A

Scope of Measure: Priority countries are those countries viewed by the FAA as strategic partners in global aviation. These countries include Canada, Mexico, Brazil, Japan, India, China, and Australia, just to name a few. NextGen supporting technologies include, but are not limited to, the basic GPS system and its capabilities, Wide and Local Area Augmentation Systems (WAAS/LAAS), Performance Based Navigation (RNAV/RNP), Performance Based Communications, Performance Based Surveillance, Automatic Dependent Surveillance - Broadcast (ADS-B), and Air Traffic Flow Management (ATFM).

Why the FAA Chooses this Measure

By working with international civil aviation authorities, organizations and States, the FAA can continue to enhance its international leadership role and ensure harmonization of U.S. Next Generation Air Transportation System (NextGen) technologies, procedures and concepts with global, regional and State-level air traffic management (ATM) modernization efforts. These same NextGen technologies, procedures, and concepts are currently being explored and implemented in the U.S. National Airspace System (NAS) and are critical to the success of the Next Generation Air Transportation System (NextGen) to handle the projected demands on the U.S. airspace system in the future. This global harmonization of aviation systems will increase the safety, capacity and efficiency of international aviation not only for U.S. carriers, but also for U.S. citizens traveling on foreign flag carriers.

Source of the Data

The Air Traffic Organization (ATO) Operations Planning International Office manages and oversees ATO international cooperation, and is also actively involved in the global efforts of the Joint Planning and Development Office (JPDO) on NextGen. As such, the ATO Operations Planning International Office will monitor all activity progress underway related to NextGen supporting technologies, procedures and concepts, and determine which country/State cooperative activity will ultimately close out this performance target for FY 2007. Data will then be collected to justify completeness.

Statistical Issues

N/A

Completeness

The FAA Air Traffic Organization (ATO) Operations Planning International Office, as the owner of this initiative and performance target, is the office that monitors international activity throughout the fiscal year, collects all pertinent documentation related to the completion of this performance target, and then assesses if the performance target was successfully achieved.

Reliability

The FAA Air Traffic Organization (ATO) Operations Planning International Office will coordinate with other supporting offices related to the management, monitoring and close-out of this performance target, mainly the different ATO Service Units, the FAA Office of International Aviation (API), and the Joint Planning and Development Office (JPDO) to cross-check and validate the successful completion of this performance target.

ORGANIZATIONAL EXCELLENCE
Employee Attitude Survey

Federal Aviation Administration

FY 2007 Performance Target

"Increase the score of the Employee Attitude Survey measure for the areas of management effectiveness and accountability to 38% positive."

Flight Plan Objective and Performance Target

Objective 1: Make the organization more effective with stronger leadership, increased commitment of individual workers to fulfill organization-wide goals, and a better prepared, better trained, safer, diverse workforce.

Performance Target: Increase the score of the Employee Attitude Survey measure for the areas of management effectiveness and accountability by at least 5 percent, over the FY 2003 baseline of 35 percent by FY 2010.

	FY 2003[1]	FY 2004	FY 2005[2]	FY 2006	FY 2007[2]
Target[3]	Baseline	No Target	36.50%	38.00%	38.00%
Actual	35.00%	N/A	37.00%	34.00%	

[1] FY 2003 and FY 2006 were census surveys. All future even years (e. g., 2008) will be a census survey.
[2] In odd-numbered years, surveys will be administered to a sample of the FAA workforce. These surveys will typically be shorter but will include the 12 items in the target measure and fulfill any government requirements to administer certain items.
[3] Previously, in FYs 2005 and 2006, targets and results were reported as a percentage point change over the baseline. FAA now reports actual score.

Definition of Measure

Unit of Measure: Percent positive for Employee Attitude Survey (EAS) metric.

Computation: The result from the FY 2003 survey is subtracted from the result from the current survey to calculate the improvement. It is an absolute difference not a relative difference.

Formula: The overall percentage of "agree", and "strongly agree" responses, pooling responses across the twelve items forming the metric, and across all respondents.

Scope of Measure: This measure is based on twelve EAS items that focus on management effectiveness and accountability. The EAS census survey will be given every other even-numbered year.

Twelve EAS items:

- Communications with my supervisor about my performance have helped clarify what is expected from me in my job.
- I am clear about how "good performance" is defined in my organization.
- My organization has clearly communicated the connection between my individual performance goals and my organization's performance goals.
- Non-supervisory employees in my organization are held accountable for achieving agency goals.
- Managers and supervisors in my organization are held accountable for achieving agency goals.
- Corrective actions are taken to deal with non-supervisory employees who perform poorly.
- Corrective actions are taken to deal with supervisors or managers who perform poorly.
- In my organization, there are service goals aimed at meeting customer expectations.
- In my organization, managers show commitment to customer support through their actions.
- It's pretty common to hear "job well done" within my organization.

- Recognition and rewards are based on merit.
- People in my organization get the credit they deserve for the work they do

Why the FAA Chooses this Measure

The Employee Attitude Survey is the main tool the FAA uses to measure employees' perceptions about management practices and the work environment. A metric, based on twelve EAS items, was developed to assess perceptions of management effectiveness and accountability.

Source of the Data

FAA employees complete the Employee Attitude Survey. The Civil Aerospace Medical Institute (CAMI) analyzes EAS data and the Assistant Administrator for Human Resource Management (AHR) coordinates the application of the results.

Statistical Issues

For even-numbered years, this metric is calculated based on a census survey, which gives an estimate of the true value within plus/minus 1 percent. In odd-numbered years, a stratified random sample is used and the estimate will be plus/minus 2.5 percent, or better. It is important to aim for at least a 50 percent response rate. Since this is a perception-based metric, factors outside of the focus of the metric, such as concerns about organizational changes, could have impacts on survey results.

Completeness

A confidence interval is calculated to assess how well the respondent sample result estimates the true (population value). The reliability of the EAS metric is assessed by the standard coefficient alpha method. The FAA uses internal research and analyses of best practices, including a contract with the Corporate Leadership Council, to ensure the metric's appropriateness. Comparisons between EAS results and government surveys, such as the Federal Human Capital Survey, provide converging data.

Reliability

See reference to the coefficient alpha measure of reliability under Completeness. The FAA has a longitudinal EAS database back to 1984 that allows FAA to assess measurement qualities. However, it must be recognized that there are a myriad of factors that can affect employees' perceptions and there is no way to statistically account for all factors. Still, FAA trend results do indicate that when FAA takes effective actions on an issue, survey results can improve. Also, the body of research on employee surveys indicates that the EAS measures factors important for organizational effectiveness.

ORGANIZATIONAL EXCELLENCE
Mission Critical Positions

Federal Aviation Administration

FY 2007 Performance Target

"Reduce the time it takes to fill mission critical positions by 1% (to 54 days) from the current FY 2006 baseline of 55 days."

Flight Plan Objective and Performance Target

Objective 1: Make the organization more effective with stronger leadership, increased commitment of individual workers to fulfill organization-wide goals, and a better prepared, better trained, safer, diverse workforce.

Performance Target: By FY 2011, reduce the time it takes to fill mission critical positions by 7 percent to 51 days over the FY 2006 baseline of 55 days.

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007[1]
Target	N/A	- 3.00%	- 6.00%	-10.00%	-1.00%
Actual	N/A	- 28.00%	- 35.00%	-19.75%	

[1] In FY 2007 measure redefined and target re-baselined to exclude air traffic controllers.

Definition of Measure

Unit of Measure: Percentage reduction of time to fill mission critical positions over baseline.

Computation: Time-to-Fill mission-critical positions (MCPs) is calculated using the difference in time from the date an action to fill a position is received from the hiring organization to the date the Office of Human Resources (AHR) makes the job offer to the individual selected to fill the position. The FAA has established an efficiency criterion to reduce the median number of days to fill mission-critical positions in annual increments. A total median for all MCPs is computed and compared to the baseline measure to determine if the percent reduction meets the performance goal. To compute the percentage reduction over the baseline, the difference between the current year result and the baseline is divided by the baseline to calculate the percentage reduction.

In FY 2006, FAA rebaselined the performance measure, without Air Traffic Controller positions which are tracked separately, and established new performance targets through FY 2011. Data from FY 2004, FY 2005, and Quarters 1 and 2 of FY 2006 were used to establish the new baseline for filling FAA MCPs.

Formula:

$$\text{Percentage reduction} = \frac{\text{Current Time to Hire} - \text{Baseline}}{\text{Baseline}}$$

Scope of Measure: The measure assesses mission-critical hires from both external and internal sources. The following occupations comprise the FAA MCP index: Aviation Safety Inspectors (1825s), Engineer/Electronics Technicians (802/856s), Transportation Specialists (2101s), IT Specialists (334s and 1550s), and Engineers (All other 800s). The identified MCPs represent about 35 percent of the onboard FAA workforce.

As a result of analyses performed in FY 2004, Air Traffic Controllers (2152s) were removed from the FAA MCP index and tracked separately. A comprehensive internal and external study of hiring practices for the Air Traffic Controller occupation was recently completed and results will be used to set a fair and challenging standard for filling controller positions.

Why the FAA Chooses this Measure

One crucial element of assuring safety and greater efficiency through organizational excellence is an efficient and quality hiring process for filling MCPs. Using the time-to-fill metric as an organizational excellence performance target, the FAA has achieved greater efficiencies when it comes to hiring the agency's most valuable asset, its people. In anticipation of the forthcoming retirement bubble, with more employees becoming retirement-eligible each year, it is in the agency's best interest to ensure that the mission-critical hiring process nets the qualified individuals needed to achieve mission results and that the hiring is accomplished in a timely manner. Measuring the time it takes to fill positions is a critical first step in improving this process.

Source of the Data

AHR staffing specialists across the country enter time-to-fill data throughout the year into a website database. The database provides a secure record of the time it takes to fill positions and allows optimal flexibility in managing and analyzing the stored information. AHR collects additional descriptive information besides the amount of time for the hiring process. This enables the office to locate delays in the process steps, as well as to examine how the FAA is doing by Region, Line of Business, and Hiring Vehicle, i.e., announcement, direct hire authority, etc. Maintaining annual records allows performance to be compared year by year.

Statistical Issues

There are several factors that can potentially influence performance variability and impact results. Hiring fluctuations, due to agency budget constraints, may significantly influence the amount of time to fill positions. In addition, low overall hire rates relative to mission critical occupations with lower fill-times and more automated processing provides less opportunity to counteract occupations with higher fill-times and more manual processing.

Completeness

AHR has implemented several practices to ensure the integrity of data in the Time-to-Fill system. For example, monthly teleconferences with regional staffing personnel have provided a forum for discussions around efficiencies in hiring processes, resulting in more standardization and streamlined practices. In addition, monthly and quarterly monitoring of the time to fill mission critical positions ensures more proactive management of hiring processes.

Reliability

The Time-to-Fill system is a dynamic system, with hiring actions entered continually by field and headquarters staffing specialists. Because the system is constantly updated, monthly reports only reflect the fill-time for hiring actions entered before the report's cut-off date. The median fill time numbers are finalized and stabilized for the year-end status report.

ORGANIZATIONAL EXCELLENCE
Reduce Workplace Injuries

Federal Aviation Administration

FY 2007 Performance Target

"Reduce the total workplace injury and illness case rate to no more than 2.76 per 100 employees."

Flight Plan Objective and Performance Target

Objective 1: Make the organization more effective with stronger leadership, increased commitment of individual workers to fulfill organization-wide goals, and a better prepared, better trained, safer, diverse workforce.

Performance Target: Reduce the total workplace injury and illness case rate to no more than 2.44 per 100 employees by the end of FY 2011, representing a cumulative 3 percent annual reduction from the FY 2003 baseline (3.12) set in the Safety, Health and Return to Employment (SHARE) Presidential Initiative.

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Target	N/A	N/A	N/A	2.85 per 100	2.76 per 100
Actual	N/A	N/A	N/A	2.17 per 100[1]	

[1] FY 2006 measure revised from preliminary estimate of 2.21 per 100.

Definition of Measure

Unit of Measure: Rate of work-related injuries and illnesses per 100 employees.

Computation: The case rate is determined by dividing the total number of cases of work-related injuries and illnesses for the entire year by the total number of employees, and multiplying by 100. (The rate is expressed in cases per 100 employees).
For the intermediate quarterly reporting, the targets are to have less than the following cumulative rates:

1st Quarter: 0.69
2nd Quarter: 1.38
3rd Quarter: 2.07

Formula:

$$\text{Total case rate} = \frac{\text{Total Cases}}{\text{Total Number of Employees}} \times 100$$

Scope of Measure: This measure includes work-related injuries and illnesses to FAA employees only. It excludes off-duty, non-work-related incidents. It also excludes injuries or illnesses of aviation employees, passengers and the general public.

Why the FAA Chooses this Measure

The total case rate is a standard measure used by the Department of Labor for evaluating workplace safety. It is used in the Presidential Safety, Health and Return-to-Employment (SHARE) Initiative, which requires agencies to reduce their total case rates by 3% per year, measured against a baseline of the agency's performance in FY 2003. This measure is important since reduction in the total case rate leads to improved productivity and quality of life for the FAA workforce and lowers costs related to workplace injuries.

Source of the Data

The data source for the number of cases is the Department of Labor (DOL) SHARE Initiative web site (currently http://www.dol.gov/esa/owcp/share/), which summarizes injuries and illnesses reported by the various agencies.

The data source for the number of employees is the Department of Transportation Workforce Demographics website (currently http://dothr.ost.dot.gov/workforceinfo/demographics.htm). The Department of Labor website uses slightly different population counts. Those counts run slightly higher than the DOT counts. As a result, DOL reports slightly lower case rates than FAA. The SHARE data reports are available quarterly, with an approximate one-month lag time. FAA will report the case rates quarterly, with a one-month lag

time.

Statistical Issues

There may be delays in the submission of claims. Also, sometimes multiple claims may result from a single workplace incident such as, chemical vapors and odors. Because of this variability, FAA provides a 10 percent margin to declare the performance status as green for the intermediate reporting (Quarters 1-3), just as is used for aviation safety targets. Thus the effective intermediate targets for reporting as green are:

1st Quarter:	0.62
2nd Quarter:	1.24
3rd Quarter:	1.86

If there are major delays in filing claims with the Department of Labor, or if there are unforeseen incidents that injure large numbers of people, the performance measure could change suddenly. However, based on historical data, the magnitude of such changes would likely be small.

Completeness

Data quality is expected to be high, since the computation follows a well-established formula from the Department of Labor, and the data sources for each variable in the formula are federal departmental level databases.

Reliability

As noted in the Completeness section, data quality is expected to be high, since the computation follows a well-established formula from the Department of Labor, and the data sources for each variable in the formula are Federal Departmental level databases. The key source of possible inaccuracy in the data is the data entry for the injury and illness reports. FAA has consolidated Workers' Compensation case management for Headquarters, Regions and both Centers, using employees with extensive specialized experience. One benefit of this consolidation should be increased data accuracy. In addition, some FAA safety professionals use the Safety Management Information System (SMIS) to cross-check mishap reports against Workers' Compensation claims to improve data accuracy.

ORGANIZATIONAL EXCELLENCE
Grievance Processing Time

Federal Aviation Administration

FY 2007 Performance Target

"Reduce average grievance processing time by 10 percent to 131 days from the 2006 baseline of 146 days."

Flight Plan Objective and Performance Target

Objective 1: Make the organization more effective with stronger leadership, increased commitment of individual workers to fulfill organization-wide goals, and a better prepared, better trained, safer, diverse workforce.

Performance Target: Reduce grievance-processing time by 25 percent by FY 2010, and maintain the reduction through FY 2011.

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Target	N/A	N/A	N/A	Set Baseline	-10.00%
Actual	N/A	N/A	N/A	Baseline Set	

Definition of Measure

Unit of Measure: The average number of days to process a grievance.

Computation: Grievance-processing time will be monitored and measured against the baseline (146 days) in FY 2007 through FY 2010. Incremental targets have been set for every fiscal year. Progress toward the overall 25 percent reduction in processing time is cumulative and should be evident in each of the 4 out years.

Formula:

$$\text{Percentage Decrease} = \frac{\text{Current Average Processing Time} - \text{Baseline}}{\text{Baseline}}$$

Scope of Measure: All union grievances nationwide filed or in process during the fiscal year in question, *except those grievances filed under the NATCA CPC contract with an incident date starting from 3 Sept 06 onward that are procedurally-deficient because they are not filed under the correct contract and/or are pre-empted by the filing of unfair labor practices charges.*

Why the FAA Chooses this Measure

To ensure a consistent and corporate labor management program, the FAA focuses on providing effective and efficient processes to train managers and supervisors, and handle grievances, negotiations, and contract administration.

Source of the Data

Grievance Electronic Tracking System (GETS). GETS is a proprietary FAA system for tracking and processing grievances. The data are entered and updated by authorized users in regions, centers and headquarters. Personnel in the National Policy and Programs Services Division, AHL-400, manage the system.

Statistical Issues

GETS is pre-programmed to calculate the number of "Days in "Process" for each step in each grievance record. These data can then be sorted, totaled, and averaged for further analysis.

Completeness

Grievances are identified and tracked by way of a unique identifying number that is assigned by GETS only after critical information (e.g., submission date) is entered into the system. Similarly, to close a record requires the entry of a decision date. AHL-400 produces monthly reports for AHR management to use to verify completeness, accuracy, consistency, and timeliness of GETS data.

Reliability

The GETS database has built-in control elements that must be populated before a record can be accepted in the database. Completed records are not deleted. Both current records and completed records can be measured.

ORGANIZATIONAL EXCELLENCE
Air Traffic Controller Workforce Plan

Federal Aviation Administration

FY 2007 Performance Target

"Maintain air traffic control workforce at, or up to 2% above the projected annual totals in the Air Traffic Controller Workforce Plan."

Flight Plan Objective and Performance Target

Objective 1: Make the organization more effective with stronger leadership, increased commitment of individual workers to fulfill organization-wide goals, and a better prepared, better trained, safer, diverse workforce.

Performance Target: Maintain air traffic control workforce at or up to 2% above the projected annual totals in the Air Traffic Controller Workforce Plan.

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007 [1]
Target	NA	NA	NA	-5%	0% to 2%
Actual	NA	NA	NA	+20%	

[1] Measure redefined for FY 2007 from percentage of hiring target met to percentage of actual workforce target.

Definition of Measure

Unit of Measure: Percentage variance of actual workforce level to Workforce Plan target

Computation: The controller workforce level adherence to plan is calculated as the variance of actual controller workforce to target, expressed as a percentage. A negative percentage of variance does not meet the target. A 0 percent to 2 percent variance to plan is acceptable.

Formula: $$\text{Percentage of Variance to Target} = \%\left(\frac{\text{Actual air traffic controller workforce}}{\text{Target air traffic controller workforce}} - 1\right)$$

Scope: Air Traffic Controller workforce level for fiscal year.

Why the FAA Chooses this Measure

The goal to maintain the air traffic controller workforce was established after publication of the December 2004 report, *A Plan for the Future: The Federal Aviation Administration's 10-year Strategy for the Air Traffic Control Workforce*. This report outlined the agency's plan to hire, staff and train controllers to ensure an adequate air traffic control workforce to meet future requirements.

Source of the Data

Data on the total number of air traffic controllers is collected by the Financial Metrics group within the Office of Finance for the Air Traffic Organization. The staffing targets are generated by the Financial Analysis and Process Re-engineering group within the Office of Finance for the Air Traffic Organization.

Statistical Issues

N/A

Completeness

The staffing data is collected and compiled monthly. Completeness is guaranteed by obtaining the staffing data from the same source each month and validation of the reports generated from the AHR data. The source of the ATO staffing data is AHR, AHP-100, FPPS Datamart.

Reliability

The reliability of these reports is ensured by 1) obtaining the staffing data from the same source each month; 2) the availability of resources in the Financial Metrics Team to produce reports when the data is available; and 3) a review of the staffing data to assure that all controllers are coded correctly and show up in the controller staffing level. Data fields requiring corrections are directed to the appropriate ATO Vice President for action.

ORGANIZATIONAL EXCELLENCE
Cost Reimbursable Contracts

Federal Aviation Administration

FY 2007 Performance Target

"Close out 85 percent of eligible cost reimbursable contracts."

Flight Plan Objective and Performance Target

Objective 2: Improve financial management while delivering quality customer service.

Performance Target: Close out 85 percent of eligible cost reimbursable contracts during each fiscal year.

	FY 2003	FY 2004[1]	FY 2005	FY 2006	FY 2007
Target	N/A	180	85.00%	85.00%	85.00%
Actual	N/A	135	170.00%	102.00%	

[1] The target for FY 2004 was number of contracts closed, rather than percentage.

Definition of Measure

Unit of Measure: The percentage of cost reimbursable contracts closed during FY 2007.

Computation: Office of Acquisition and Policy determined the total number of cost reimbursable-type contracts that ended and are eligible for close-out in the previous two fiscal years. In FYs 2005 and 2006, sixty-three contracts were eligible for close-out. The goal is to close out 85 percent of that number, or 54 contracts.

Formula: $$\text{Percentage of Eligible Contracts Closed Out} = \frac{\text{Number of Contracts Closed Out}}{\text{Number of Eligible Contracts}}$$

Scope of Measure: The number of cost reimbursable type contracts (i.e., cost reimbursement, labor hour, time and materials and indefinite quantity/indefinite delivery) closed throughout the fiscal year.

Why the FAA Chooses this Measure

It is important for the Agency to close out contracts in a timely basis. By doing so, contracts are administered more efficiently and Agency liability is reduced. The Agency avoids accumulating a backlog of old, unclosed contracts. It is important to maintain high close-out rates to avoid such issues as the loss of expired funds, loss of file documents, loss of vendor's corporate knowledge, and/or changes in the contractor's business status. A high number of unclosed contracts can create potentially large liabilities where final amounts are due to or from the contractor and the Agency loses the use of funds that could otherwise be recouped. Such a situation could create a material weakness in the Agency's annual audit.

Source of the Data

PRISM is used to identify cost reimbursable-type contracts for which performance has ended. On a monthly basis, closed contracts are reported to the Contracts Oversight Branch by either the contracting officer who closed-out the contract(s) or the contractor tasked with closing-out FAA contracts.

Statistical Issues

The nature of close-out activities tends to result in an increase in contract close-outs reported during the third and fourth quarters of the fiscal year. The close-out process involves obtaining a final invoice, final audit and identifying any necessary funds to close-out the contract. Hence, closed contracts are not reported evenly during the fiscal year.

Completeness

The Contract Support Systems branch maintains a database of all closed contracts. Division managers report the number of closed contracts to the Contracts Oversight branch on a monthly basis. In addition, closed contract files are received in the branch for distribution to central archives. It is possible that closed contracts do not get entered into the database, if they are not reported to the Contracts Oversight branch by the procurement divisions. Therefore, there may be a slight risk of the number of closed contracts being under-reported.

Reliability

Only contracts that are closed-out completely (no outstanding issues) are entered into the database. Therefore, there is no chance of entering contracts into the database that are not closed.

ORGANIZATIONAL EXCELLENCE
Cost Control

Federal Aviation Administration

FY 2007 Performance Target

"Organizations throughout the agency will continue to implement cost efficiency initiatives."

Flight Plan Objective and Performance Target

Objective 2: Improve financial management while delivering quality customer service.

Performance Target: Organizations throughout the agency will continue to implement cost efficiency initiatives including, but not limited to:

- 10-15% savings for strategic sourcing for selected products and services;
- Consolidating facilities and services, such as service areas, real property management, and web services;
- 3% reduction in help desk operating costs through consolidations;
- Eliminating or reducing obsolete technology; and
- $15 million reduction in Information Technology operating costs.

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Target	NA	NA	Implement Program	1 Activity per Organization	1 Activity per Organization
Actual	NA	NA	Program Implemented	1 Activity per Organization	

Definition of Measure

Unit of Measure: At least one cost control activity or one productivity improvement activity from the following Lines of Business/Staff Offices: ATO, AVS, ARP, AST, ABA, AIO, ARC, AHR, AGC, API, AEP, ASH.

Computation: A count of the number of organizations involved from those listed above.

Formula: N/A

Scope of Measure: Any actions that save money, avoid incurring additional costs or streamline a process could qualify for inclusion. Examples include reduced staffing levels, reduced travel, reduction of contract support, and consolidation of similar activities that may have been performed at more than one location within the agency.

Productivity improvements are any initiative that improves the efficiency of an organization. Examples include:

- More evenly allocating work loads;
- Synchronizing inspections of certain tasks;
- Increasing the percentage of electronic payments made to vendors.

Productivity improvement activities can either increase output while maintaining the same level of input or maintain the same level of output while reducing the level of input.

Why the FAA Chooses this Measure

FAA's operating costs have increased significantly over the past decade. Furthermore, oversight authorities such as the Office of Inspector General and the Government Accountability Office have raised concerns regarding FAA's escalating costs. To address these concerns, the agency is taking aggressive steps to stem the growth of operating costs. Cost Control is a centrally developed and managed initiative under the executive direction of FAA's Chief Financial Officer. It provides the necessary impetus for implementing sustained and successful cost control activities. Organizations' participation and progress is reported to the Administrator and the Executive Management team at monthly Flight Plan meetings.

Source of the Data

Each organization -- Line of Business or Staff Office (LOB/SO) -- utilizes an Office of Financial Services (ABA) -designed financial template to propose a cost saving, cost avoidance and/or productivity improvement activity. Once submitted, the cost control activity undergoes rigorous reviews by ABA Analysts who validate the cost proposals and associated financial computations. Cost control activities are then tracked and reported on a monthly basis by the responsible organization, which provides regular status updates on progress toward their annual cost control goals.

Statistical Issues

None.

Completeness

Each completed template is retained on an ABA shared drive.

Reliability

ABA verifies organizations' activities, milestones, and dollars saved/avoided using a template completed by the organizations. The individual organizations are responsible for maintaining files and spreadsheets containing supporting calculations and documentation on their activity to ensure verification by audit. There is minimal risk of inaccurate reporting.

ORGANIZATIONAL EXCELLENCE
Clean Audit

Federal Aviation Administration

FY 2007 Performance Target

"Obtain an unqualified opinion on the agency's financial statements (Clean Audit with no material weaknesses)."

Flight Plan Objective and Performance Target

Objective 2: Improve financial management while delivering quality customer service.

Performance Target: Obtain an unqualified opinion on the agency's financial statements (Clean Audit with No Material Weaknesses [NMW]) each fiscal year.

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Target	N/A	N/A	N/A	Clean Audit w/NMW[1]	Clean Audit w/NMW
Actual	Clean Audit	Clean Audit	Clean Audit	Qualified Opinion	

[1] Beginning in FY 2006, the Flight Plan specified not only a clean audit but also no material weaknesses (NMW) found.

Definition of Measure

Unit of Measure: Unqualified independent auditors' opinion rendered on FAA's annual financial statements, with no material weaknesses.

Computation: N/A

Formula: N/A

Scope of Measure: The scope of this measure includes FAA's annual audited financial statements, related footnotes, and required supplementary information—all of which are published by FAA in its annual Performance and Accountability Report.

Why the FAA Chooses this Measure

The FAA chooses this measure because it is an independent assessment of FAA's internal control environment over financial reporting, FAA's compliance with certain laws & regulations, and FAA's ability to fairly present the results of its financial position and activities during the year.

Source of the Data

The data used to evaluate FAA's measure against this target comes from the independent auditors' report, issued as a result of their audit of FAA's annual financial statements. The auditors' report is published annually in FAA's Performance and Accountability Report.

Statistical Issues

N/A

Completeness

N/A

Reliability

N/A

ORGANIZATIONAL EXCELLENCE
Critical Acquisitions On Budget

Federal Aviation Administration

FY 2007 Performance Target

"Make sure 87.50% of critical acquisition programs are within 10% of budget as reflected in the Capital Investment Plan (CIP)."

Flight Plan Objective and Performance Target

Objective 3: Make decisions based on reliable data to improve our overall performance and customer satisfaction.

Performance Target: By FY 2008, 90 percent of major system acquisition investments are within 10 percent of annual budget and maintain through FY 2011.

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Target	80.00%	80.00%	80.00%	85.00%	87.50%
Actual	88.00%	100.00%	97.00%	100.00%	

Definition of Measure

Unit of Measure: Percentage of programs within 10 percent of planned budget.

Computation: Cost performance for each program is measured by comparing the total F&E budget-at-completion amount established in the January FAA Capital Investment Plan (CIP) against the projected budget-at-completion amount published in the August CIP. Any program with a total budget-at-completion variance of more than 10% is considered to not have met the established fiscal year cost performance goal.

Formula:

$$\text{Budget Performance per Program} = \frac{\text{January Budget at Completion Amount}}{\text{August Budget at Completion Projection}}$$

Scope of Measure: FAA's Air Traffic Organization (ATO) Service Units select specific programs that are determined to provide a capital asset to the NAS. For FY 2007, 37 acquisition programs will be tracked and monitored. Most of the programs selected are considered "major" and must submit an exhibit 300. Those that do not provide exhibit 300s are included because they contribute an asset to the NAS with a useful life of more than two years. The designation of "critical acquisition programs" in the title of this performance target expresses the critical value of the program to the NAS. The budget measure is set to the January 2005 CIP.

Why the FAA Chooses this Measure

The Critical Acquisitions on Budget target represents a progressive measure for each fiscal year of the performance of critical FAA acquisition programs. The performance measure began in FY 2003 and will continue each fiscal year through the acquisition of the selected programs. The performance target will increase each year until it reaches 90 percent in FY 2008. This progressive increase from 80 percent in FY 2003 to 90 percent by FY 2008 will ensure that the FAA's Acquisition performance is consistent with targets set in *The Department of Transportation Strategic Plan 2003-2008*. Reaching the 90 percent target by FY 2008 will also ensure that FAA performance goals meet *The Federal Acquisition Streamlining Act of 1994, Title V (FASA V)*. This Act requires agencies to establish cost and schedule performance goals for all major acquisition programs and to achieve 90 percent of those goals.

Source of the Data

ATO tracks and reports status of all schedule and cost performance targets using an automated database. ATO Service Units provide a monthly Red, Yellow, or Green assessment that indicates their confidence level in meeting their established milestones. Comments are provided monthly that detail problems, issues, and corrective actions, ensure milestones and cost are maintained within the established performance target. The performance status is reported monthly to the ATO Executive Committee through the ATO Strategic Management Process (SMP) and to the FAA Administrator through FAA Flight Plan meetings.

Statistical Issues

The programs that are selected each fiscal year represent a cross section of programs within the ATO. They include programs that have an Exhibit 300 as well as what is referred to as “buy-by-the-pound” programs. The latter typically do not undergo a standard acquisition life cycle process.

Completeness

This measure is current with no missing data. Each DOT organization maintains its own quality control checks for cost, schedule, and technical performance data of each major systems acquisition in accordance with OMB Circulars A-11, A-109, and A-130, Federal Acquisition Regulations, and Departmental orders implementing those directives and regulations.

Reliability

Each DOT organization having major system acquisitions uses the data during periodic acquisition program reviews, for determining resource requests. They are also used during the annual budget preparation process, for reporting progress made in the President’s budget and for making key program management decisions. The monthly status is reported through the SPIRE database and included in monthly high-level management reviews. Once the program is selected and approved for tracking purposes it is reported on with detailed commentary each month, and assigned a Red, Yellow, or Green Confidence indicator that the cost is within the 10% threshold. These detailed reports are reviewed at all levels of the appropriate Service Unit, Executive levels within the ATO, and the FAA Administrator.

ORGANIZATIONAL EXCELLENCE
Critical Acquisitions On Schedule

Federal Aviation Administration

FY 2007 Performance Target

"Make sure 87.50% of critical acquisition programs are on schedule. "

Flight Plan Objective and Performance Target

Objective 3: Make decisions based on reliable data to improve our overall performance and customer satisfaction.

Performance Target: By FY 2008, 90 percent of major system acquisition investments are on schedule and maintain through FY 2011.

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Target	80.00%	80.00%	80.00%	85.00%	87.50%
Actual[1]	77.00%	91.50%	92.00%	97.44%	

[1] In DOT's FY 2005 PAR, the FY 2003 result is reported as 78%. This discrepancy is due to the use of weighting in the calculation by DOT, which was discontinued in FY 2004. Also, the results for FY 2004 are rounded up to 92% in the DOT PAR.

Definition of Measure

Unit of Measure: Percentage of programs meeting 90 percent of milestones.

Computation: Schedule performance is measured by dividing the total number of milestones that meet their fiscal year schedule dates by the total number of milestones planned for the year being measured. The total number of milestones that can be missed and remain within the 87.5 percent performance measure will vary for each fiscal year.

Formula:

$$\text{Schedule Performance per Program} = \frac{\text{Number of Milestones Met}}{\text{Total Number of Milestones Tracked}}$$

Scope of Measure: FAA's Air Traffic Organization (ATO) Service Units select specific milestones and completion dates against programs that are determined to provide a capital asset to the NAS. For FY 2007, 67 selected critical milestones will be tracked against 37 acquisition programs. Fifty-Eight (58) milestones must meet their targeted date to be within 87.50 percent of the performance goal. Most of the programs selected are considered "major" and must submit an exhibit 300. Those that do not provide exhibit 300's are included because they provide an asset to the NAS with a useful life of more than two years. The designation of "critical acquisition programs" in the title of the performance target expresses the critical value of the program to the NAS. The schedule measure is set to only those milestones selected. No milestones are added during the year.

Why the FAA Chooses this Measure

The Critical Acquisitions on Schedule target represents a progressive measure for each fiscal year of the performance of critical FAA acquisition programs. The performance measure began in FY 2003 and will continue each fiscal year through the acquisition of the selected programs. The performance target will increase each year until it reaches 90 percent in FY 2008. This progressive increase from 80 percent in FY 2003 to 90 percent by FY 2008 will ensure that the FAA's acquisition performance is consistent with targets set in *The Department of Transportation Strategic Plan 2003-2008*. Reaching the 90 percent target by FY 2008 will also ensure that FAA performance goals meet *The Federal Acquisition Streamlining Act of 1994, Title V (FASA V)*. This Act requires agencies to establish, cost, schedule, and measurable performance goals for all major acquisition programs and achieve 90 percent of those goals.

Source of the Data

ATO tracks and reports status of all schedule and cost performance targets using an automated database. ATO Service Units provide a monthly Red, Yellow, or Green assessment that indicates their confidence level in meeting their established milestones. Comments are provided monthly that detail problems, issues, and corrective actions to ensure milestones and cost are maintained within the established performance target. The performance status is reported monthly to the ATO Executive Committee through the ATO Strategic Management Process (SMP) and to the FAA Administrator through FAA Flight Plan meetings.

Statistical Issues

The programs that are selected each fiscal year represent a cross section of programs within the ATO. They include programs that have an Exhibit 300 as well as what is referred to as "buy-by-the-pound" programs. The latter are typically not required to undergo a standard acquisition life cycle process. There is no bias with the selection of milestones. The milestones selected represent the program office's determination as to what effort they deem "critical" or important enough to warrant inclusion in the Acquisition Performance goal for the year. Typically there are anywhere from two to four milestones. Interim milestones are also tracked but not included in the final performance calculation.

Completeness

This measure is current with no missing data. Each DOT organization maintains its own quality control checks for cost, schedule, and technical performance data of each major systems acquisition in accordance with OMB Circulars A-11, A-109, and A-130, Federal Acquisition Regulations, and Departmental orders implementing those directives and regulations.

Reliability

Each DOT organization having major system acquisitions uses the data during periodic acquisition program reviews, for determining resource requests. They are also used during the annual budget preparation process, for reporting progress made in the President's budget and for making key program management decisions. The monthly status is reported through the SPIRE database and included in monthly high-level management reviews. Since the Acquisition Performance target is a fiscal year performance measure the specific milestone and date selected is set at the beginning of each fiscal year and not changed. The ATO Executive Council must approve all requested changes. Once the milestone is approved it is reported on with detailed commentary each month, and assigned a Red, Yellow, or Green confidence indicator that the milestone will be met on schedule. These detailed reports are reviewed at all levels of the appropriate Service Unit, Executive levels, within the ATO and up to FAA Administrator.

ORGANIZATIONAL EXCELLENCE
Customer Satisfaction

Federal Aviation Administration

FY 2007 Performance Target

"Increase agency scores on the American Customer Satisfaction Index, which surveys commercial pilots, to 66."

Flight Plan Objective and Performance Target

Objective 3: Make decisions based on reliable data to improve our overall performance and customer satisfaction.

Performance Target: Increase Agency scores on the American Customer Satisfaction Index which surveys commercial pilots.

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Target	62	63	64	65	66
Actual	64	65	66	70	

Definition of Measure

Unit of Measure: The ACSI reports scores on a 0 to 100 scale at the national level.

Computation: The ACSI model is a set of causal equations that link customer expectations, perceived quality, and perceived value to customer satisfaction (ACSI). The FAA's score is compared to the annual target to determine if the agency's goal has been met. Data are collected at the individual customer level, with scores for a company's customers aggregated to produce the company-level results.

Formula: N/A

Scope of Measure: The University of Michigan draws a sample of 260 names for interview (telephone) from a random subset of a list of 10,000 certified airmen maintained at the Civil Aviation Registry. Customer base is a licensed commercial pilot with a current, active first or second-class medical certificate.

Why the FAA Chooses this Measure

Established in 1994, the American Customer Satisfaction Index (ACSI) is a uniform and independent measure of household consumption experience. The ACSI tracks trends in customer satisfaction and provides benchmarking insights of the consumer economy for companies, industry trade associations, and government agencies. The ACSI is produced by the Stephen M. Ross Business School at the University of Michigan, in partnership with the American Society for Quality (ASQ) and the international consulting firm, CFI Group. It provides a recognized, independent source of customer satisfaction information.

Source of the Data

American Customer Satisfaction Index produced by the National Quality Research Center at the University of Michigan Business School.

Statistical Issues

Represents only a segment of the FAA's customer base.

Completeness

N/A

Reliability

According to ACSI, "Typically, differences of 3 points or more between companies/agencies or between two scores for the same company/agency are greater than could be caused by sampling error."

FY 2007 Performance Target

"Zero cyber-security events that significantly disable or degrade FAA services."

Flight Plan Objective and Performance Target

Objective 3: Make decisions based on reliable data to improve our overall performance and customer satisfaction

Performance Target: Achieve zero cyber-security events that disable or significantly degrade FAA services.

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Target	N/A	90%[1]	0	0	0
Actual	N/A	100%	0	0	

[1] Target for FY 2004 was percentage of milestones achieved.

Definition of Measure

Unit of Measure: Number of successful cyber attacks as determined by FAA's Cyber-Security Incident Response Center (CSIRC).

Computation: A count of the number of successful cyber-attacks in the current fiscal year.

Formula: N/A

Scope of Measure: The measure is applicable to the agency's Information Technology assets, defined by TCP/IP systems, which contribute to the delivery of FAA services.

The FAA has an information security concept to protect the agency's IT assets in accordance with numerous executive and legal requirements, including the Computer Security Act, Executive Order 13231, and the Federal Information Security Management Act (FISMA), as well as in accordance with DOT and FAA policy.

Why the FAA Chooses this Measure

Hackers seek to disrupt, or exploit critical infrastructure across the United States. One critical infrastructure, as identified by the President in Homeland Security Presidential Directive/ HSPD-7, is our transportation system, including aviation. Accordingly, the FAA, whose mission is to ensure the safe and efficient movement of aircraft, must be protected against the threat of cyber-attacks. The Office of Information Services (AIO) has the agency lead for ensuring that these attacks do not significantly disable or degrade FAA services.

Source of the Data

The data on cyber-security attacks comes from data collected by the FAA's Computer Security Incident Response Center, which is part of AIO.

Statistical Issues

N/A

Completeness

The FAA's CSIRC and DOT's Transportation Cyber Incident Response Center (TCIRC) work collaboratively to validate cyber incidents on FAA and departmental systems. This process provides the most accurate and up-to-date measure. The FAA and DOT use current and historical data to validate trends, which indicate an increase in the number and complexity of cyber-attacks.

AIO has sensors on the FAA's administrative networks; ATO's FTI Program office has sensors on both the NAS and the administrative networks, which report to the CSIRC. AIO is the primary focal point of incident reporting to the DOT and USCERT.

Reliability

The FAA's CSIRC and DOT TSIRC work together in collaboration with other ISS components in the federal government. The CSIRC has the responsibility, as outlined in FAA Order 1370.82, of being the focal point for all cyber incidents in the FAA.